XVIII. On the South American species of Diabrotica. Part II. By Charles J. Gahan, M.A., F.E.S., Assistant in the Zoological Department, British Museum.

#### [Read July 1st, 1891.]

THE present paper is intended to serve as a continuation of one on the same subject by the late Mr. Joseph S. Baly, F.L.S., &c., which appeared in the first Part of the 'Transactions' of this Society for the year 1890.

A few words in explanation of the circumstances under which I have been induced to write it may not be out of place. Mr. Baly's collection of Galerucide having passed into the possession of the British Museum, I have been entrusted with its arrangement and incorpora-A number of manuscript descriptions of species the result of Mr. Baly's work towards a completion of his monograph—was handed over to my care. As this manuscript was in an unfinished state, and without arrangement, it could not with advantage be presented for publication. I have endeavoured instead to complete this second part of the paper, and have included in it nearly all of Mr. Baly's manuscript descriptions. These are clearly indicated in the text, so that Mr. Baly's share of the work may be easily distinguished from my own. I have omitted a few descriptions, having been unable in such cases to satisfy myself as to the identity of the species. Except in a few instances, I have had to add the references to previously published short diagnoses or descriptions.

In the arrangement of the species I have endeavoured to make use, as far as possible, of structural characters. In grouping many of the species, however, I have had to rely upon a general resemblance in facies or coloration.

tion.

#### TABLE.

- Section II. Fourth joint of the antennæ shorter than the second and third united.
- A. Elongate or oblong, slightly dilated posteriorly; elytra with raised longitudinal lines, of which one or two on the inner disk of each are somewhat broader than the rest; seriate or subscriate-punctate, the punctures arranged more or less regularly in double rows between the raised lines.

a. Elytra blue, green, brownish, or black; each with a marginal band and a subsutural vitta vellowish.

b. Elytra each with more than one raised line; with the subsutural and marginal vittæ united at the apex.

c. Prothorax yellowish or testaceous. Species 1-6 and 9-12.

cc. Prothorax black. Species 7 and 8.

bb. Elytra each with a single (dorsal) costa, which is abbreviated behind, with the dorsal and marginal vittæ both interrupted posteriorly. Species 13.

aa. Elytra entirely fulvous.

- d. Prothorax black. Species 14.
- dd. Prothorax testaceous. Species 15.
- B. Species small; oblong-ovate, feebly dilated posteriorly; elytra with more or less feebly raised lines, or with a strongly punctured longitudinal depression towards each side between the shoulder and the middle.

a. Elytra with obsolete raised lines. Species 16—18.

- aa. Elytra with longitudinal depression behind each shoulder. Species 19 and 20.
- C. Body oblong or elongate, distinctly dilated posteriorly. Each elytron in the male with a subsutural cariniform tubercle posteriorly.
  - a. Elytra with distinctly raised lougitudinal lines, the intervals between which are strongly and rugosely punctured.

b. Prothorax black. Species 21 and 22.

bb. Prothorax yellowish or testaceous. Species 23-26.

aa. Elytra closely and somewhat rugosely punctured; with feebly or obsoletely raised longitudinal lines.

c. Prothorax black. Species 27.

cc. Prothorax yellowish or testaceous. Species 28-31.

- aaa. Elytra strongly and very closely punctured; without raised lines; entirely metallic-blue, green, or violaceous. Species 32 and 33.
- aaaa. Elytra densely and less strongly punctured; nitid or subnitid. Species 34—38.
- D. Body elongate, dilated posteriorly; elytra torulose or with depressions and small swellings on the middle of the disk. Species 39—41.
- E. Elytra elongate or oblong, either entirely metallic-blue, green, or black, or with the outer limb only yellowish.

a. Elytra strongly and very closely punctured, dilated posteriorly.

b. Elytra entirely metallic-blue or green. Species 42, 43.

bb. Elytra with outer limb yellowish. Species 44-46.

aa. Elytra thickly and more or less strongly punctured, feebly dilated posteriorly; outer limb yellowish. Species 47—53. F. Ovate, slightly dilated posteriorly. Elytra either wholly metallicblue or green, or with longitudinal fulvous bands.

a. Elytra wholly metallic-blue or green. Species 54.

aa. Elytra metallic-blue or violet, with outer margin and a sutural vitta, posteriorly abbreviate, fulvous. Species 55.

aaa. Elytra piceous or brown, with suture, entire outer limb, and a median vitta on each fulyous or yellowish. Species 56, 57.

G. Ovate or oblong-ovate, dilated posteriorly.

a. Elytra fulvous or yellowish, with black or brown spots or lines.

b. Elytra with spots or plage.

c. Prothorax black or piceous. Species 58-60.

cc. Prothorax wholly or partly yellowish. Species 61-64.

- bb. Elytra with longitudinal lines or bands, sometimes also with spots in addition. Species 65-67.
- aa. Elytra piceous, black or blue, with yellowish or fulvous markings.

d. Prothorax wholly or partly fulvous. Species 68-70. Prothorax black. Species 71.

- H. Elongate-ovate, feebly dilated posteriorly. Elytra black or brown, with yellowish or greenish markings. Species 72-74.
- I. Body subelongate, dilated posteriorly. Antennæ in the male with joints 3rd to 5th somewhat thickened, and usually more or less elongated.

a. Intermediate tibiæ in the male normal. Species 75.

- aa. Intermediate tibiæ in the male strongly curved, produced into a tooth at the apex on the ventral side. Species 76.
- aaa. Intermediate tibiæ in the male incrassate below, the incrassation beginning with an obtuse tooth or angulation placed either above the middle, at the middle, or nearer to the apex.

b. The incrassation of the intermediate tibiæ beginning at or below the middle. Species 77-81.

- bb. The incrassation of the intermediate tibiæ beginning above the middle. Species 82, 83.
- J. Ovate or oblong-ovate, dilated posteriorly; elytra usually black, with yellowish fasciæ or vittæ. Species 84-98.
- K. Elytra oblong-ovate, distinctly dilated posteriorly, strongly convex, their apices broadly rounded or subtruncate. Head in the male concave or excavated in front.

a. Elytra black or reddish brown, with yellowish bands.

b. Epipleures of elytra black.

c. Elytra with feebly or obsoletely raised lines. Species 99—103.

cc. Elytra without raised lines. Species 104, 105.

bb. Epipleures of elytra, and usually also the entire outer limb, yellowish.

d. Punctuation of elytra rather coarse. Species 106—108.

- dd. Punctuation of elytra finer. Species 109—114.
  aa. Elytra yellowish, with black bands or spots. Species 115, 116. aaa. Elytra entirely yellowish or fulvous. Species 117, 118.
- L. Ovate, distinctly dilated posteriorly. Elytra subventricose, strongly
  - convex posteriorly. a. Elytra ampliate, strongly reticulate-corrugate. Species 119.

aa. Elytra wrinkled in parts. Species 120, 121.

aaa. Elytra coarsely rugulose-punctate. Species 122—124.

aaaa. Elytra strongly and closely punctured, without being distinctly rugose. Species 125—127.

aaaaa. Elytra less strongly and less closely punctured, nitid. Species

128 - 130,

- M. Rather broadly ovate, distinctly dilated posteriorly. Elytra with basal half or third part fulvous, the posterior part black or
  - a. Elytra with posterior dark part opaque. Species 131—134.
  - aa. Elytra with posterior dark part nitid. Species 135—137.
- N. Ovate, dilated posteriorly. Elytra usually fulvous or yellowish, with black plage. Each elytron in the male of some of the species with a distinct tubercle placed close to the suture a little before the anex.

a. Prothorax black.

b. Each elytron with two plage or spots, one near the base, the other post-median. Species 139, 140.

bb. Elytra with two irregular common black bands. Species 141.

aa. Prothorax yellowish or fulvous.

- c. Each elytron with two black plage or spots. Species 142-144.
- cc. Each elytron with two basal spots and a large post-median spot or plaga black. Species 145.

ccc. Elytra with the apex broadly and a common basal spot black. Species 146.

cccc. Elytra with two large apical plage conjoined at the suture, without basal spot. Species 147.

O. Broadly ovate. Elytra strongly dilated.

- a. Prothorax yellowish, with two black spots. Elytra yellowish white, each with a subsutural and a submarginal black vitta. Species 148.
- aa. Prothorax wholly yellowish. Elytra black, with a broad outer limb slightly dilated at the apex, yellowish. Species 149.
- aaa. Prothorax black. Elytra strongly convex, entirely bright metallic-green. Species 150.
- P. Species that may be distinguished by the peculiar structure of the antennæ of the male.
  - a. Antennæ with the 3rd and 6th joints thickened and peculiarly shaped. Species 151.
  - aa. Antennæ with the last four joints dilated, the 8th and 9th more strongly so than the two last. Species 152.

aaa. Antennæ with the last three joints very strongly thickened in the form of a club. Species 153.

auaa. Antennæ with the last two joints elongated and considerably dilated. Species 154.

#### 1. Diabrotica corusca, Harold.

Coleopt., Hefte xiii. (1875), p. 92; Baly, Journ. Linn. Soc., xix., p. 230.

Hab. Colombia; also Mexico.

# 2. Diabrotica innuba, Fabr.

Syst. Ent., p. 117; Baly, Journ. Linn. Soc., xix., p. 230.

Hab. Colombia, Cayenne; West Indies, Mexico, and North America.

3. Diabrotica Fairmairei, Baly.

Hab. Peru; Mexico.

4. Diabrotica consimilis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 447.

Hab. Ecuador, and Peru.

This species is very nearly allied to *D. Fairmairei*, Baly. It may be doubted whether the differences are more than varietal. In *D. consimilis* the head is black, the antennæ are dark brown except at the extreme base; the flavous dorsal vitta of each elytron covers only the third costa, which is somewhat broader than the others. In *D. Fairmairei* the head and antennæ are reddish, the former sometimes with a violaceous or chalybeous tint; the dorsal flavous vitta of each elytron covers not only the third costa, but also the two rows of punctures on each side of it. The dorsal vitta is consequently broader, but the third costa itself is scarcely broader in *Fairmairei* than in *consimilis*.

# 5. Diabrotica albidovittata, Baly.

Proc. Zool. Soc., 1889, p. 95.

Ovata, postice paullo ampliata, convexa, nigro-picea, nitida, femoribus basi flavis, capite thoraceque piceo-rufis, antennis nigris, articulis octavo nonoque albidis; thorace profunde bifoveolato; elytris piceo-nigris, subnitidis, elevato-vittatis, costa tertia a sutura quam cæteris latiore utrisque limbo externo costaque tertia albidis apice confluentibus.

Long. 3 lin.

Hab. Brazil, St. Catharina.

Head triangular, not longer than broad; clypeus with a strongly raised longitudinal ridge, which runs downwards to join the thickened anterior margin; antennæ three-fourths the length of the body, filiform, the second joint short, obovate, the third and fourth equal, each twice the length of the second; black, the eighth and ninth joints, and in some specimens the lower three-fourths of the tenth, white. Thorax nearly one-half broader than long; sides rounded anteriorly, sinuate behind the middle, the hinder and anterior angles obtuse, the former prominent; above convex, the disk deeply bifoveolate, Elytra oblong-ovate, dilated posteriorly, regularly rounded conjointly at their apices, convex;

TRANS. ENT. SOC. LOND. 1891.—PART III. (OCT.) 2 F

each elytron with eight strongly raised costæ, the third from the suture broader than the rest. [Baly.]

6. Diabrotica venalis, Erichs.

Archiv. für Naturgeschichte, 1847, i., p. 169.

Hab. Peru.

Blackish brown. Head and prothorax reddish testaceous, the latter smooth and glossy, with two foveolate impressions just behind the middle of the disk. Elytra dark brown, with the costæ not very strongly raised, with the lateral border and a dorsal stripe (embracing the third costa only) of each elytron flavous. Antennæ with the three (or four) basal joints testaceous, the remaining joints black. Legs brownish, with the basal half or two-thirds of the femora flavous.

From *innuba*, Fabr., which it most nearly resembles, this species may be distinguished by the testaceous head, the black antennæ with only three or four of the basal joints testaceous, and by the broader third costa of the elytra. The dorsal yellow vitta embraces only the third costa in *venalis*, while in *innuba* it covers both the second and third costæ, which are equal in width.

7. Diabrotica cornuta, Baly.

Trans. Ent. Soc. Lond., 1886, p. 448. Hab. Peru: Guatemala. Mexico.

8. Diabrotica semifemorata, sp. n.

Diabrotica semifemorata, Chev. MS.

Hab. Bolivia.

Black. Prothorax nitid, with two distinct foveolate impressions on the hinder half of the disk. Elytra with feebly raised costæ; black, with the lateral limb and a dorsal stripe, embracing the broad third costa of each, flavous. Antennæ black, with the basal three joints underneath, the eighth wholly, and the basal half of the ninth, flavous. Legs black, with the basal half of the femora flavous.

This species resembles D. cornuta, Baly, but is to be distinguished by the colour of the head (black), legs, and antenne, and by the less strongly raised coste of the elytra. Uncertain of the sex of the single specimen

before me (which is probably a female), I cannot assign any specific value to the absence of the laterally projecting processes or horns from the clypeal margin, which are characteristic of  $D.\ cornuta,\ \sigma$ .

# 9. Diabrotica Kirschi, Baly.

Journ. Linn. Soc, xix., p. 231.

? Diabrotica demissa, Erichs., Wieg. Archiv., 1847, i., p. 169.

Hab. Colombia; Mexico.

# 10. Diabrotica Theimi, Baly.

Journ. Linn. Soc., xix., p. 231.

Hab. Bahia, Ecuador, Colombia, Cayenne; Mexico and West India Islands.

# 11. Diabrotica bivittula, Kirsch.

Berl. Ent. Zeit., xxvii. (1883), p. 203.

Hab. Brazil.

# 12. Diabrotica separata, Baly.

Journ. Linn. Soc., xix., p. 232.

Hab. Colombia, Amazons, Cayenne.

#### 13. Diabrotica vittigera, Bohem.

Res. Eugen., p. 178.

Hab. Buenos Ayres, Monte Video.

# 14. Diabrotica vittatipennis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 454.

Hab. Eastern Ecuador.

# 15. Diabrotica Balyana, Gahan, n.n.

Diabrotica melanocephala, Baly, Trans. Ent. Soc Lond., 1886, p. 455.

Hab. Eastern Ecuador.

16. Diabrotica similata, Baly.

Journ. Linn. Soc., xix., p. 235.

Hab. Colombia, Venezuela.

16a. Diabrotica mediovittata, Baly.

L. c., p. 237.

Hab. Colombia; also Honduras, Nicaragua, and Panama.

This species is, in Mr. Jacoby's opinion (which I am inclined to share), scarcely more than a variety of the preceding.

17. Diabrotica incerta, Baly.

Journ. Linn. Soc., xix., p. 236.

Hab. Colombia, Bogota, Magdalena River.

18. Diabrotica perplexa, Baly.

Journ. Linn. Soc., xix., p. 237.

Hab. Colombia.

19. Diabrotica lætabilis, Baly.

Journ. Linn. Soc., xix., p. 257.

Hab. Colombia-Magdalena River, Bogota.

20. Diabrotica puella, Baly.

L. c., p. 238.

Var. D. cinctella, Harold, Mitt. Münch. Ent. Ver., 1877, p. 110.

Hab. Colombia; also Central America—Nicaragua, Panama.

21. Diabrotica flavolimbata, Erichs.

Archiv. für Naturgeschichte, 1847, i., p. 169. Diabrotica Balyi, Jac., Cist. Ent., ii., p. 525.

22. Diabrotica puncticollis, Baly.

Trans. Ent. Soc. Lond., 1865, p. 346; Journ. Linn. Soc., xix., p. 234.

Hab. Colombia.

23. Diabrotica cognata, Baly.

P. Z. S., 1889, p. 93.

Late ovate, postice sat valde ampliata, convexa, dorso subdepressa fulva, nitida, pectore, scutello capiteque nigris; thorace transverso, fortiter punctato, disco profunde bifoveolato; elytris rude et profunde subseriato-punctatis, utrisque tricostatis, nigris, limbo externo fulvo, tibiis anticis quatuor dorso, tarsisque quatuor anticis piceo-tinctis.

Long. 9 mm.

Hab. Ecuador (Buckley).

Head scarcely longer than broad, triangular, black, the jaws and palpi piceo-fulvous; clypeus with a strongly raised longitudinal ridge, sides granulose-punctate; antennæ four-fifths the length of body, slender, filiform, the second joint short, subovate, the third three times its length, the fourth as long as the third. Thorax twice as broad as long; sides deeply sinuate, and diverging from the base to beyond the middle, thence rounded to the apex, anterior and posterior angles produced, the former obtuse, the latter subacute: upper surface strongly but not very closely punctured, impressed scarcely behind the middle with two large deep foveæ; the space between slightly depressed. Elytra with the sides gradually dilated from the base to the posterior angle, their apices conjointly regularly rounded; above convex on the sides, flattened along the suture, coarsely and strongly subseriate-punctate; each elytron with three strongly raised longitudinal costa, which extend from the base nearly to the apex. [Baly.]

24. Diabrotica rugata, Baly.

Ann. and Mag. Nat. Hist., 5th ser., vol. iii. (1879), p. 84.

Hab. Ecuador.

25. Diabrotica coryphæa, Baly.

Diabrotica coryphæa, Baly, Journ. Linn. Soc., xix., p. 233.

D. puncticollis, var., Kirsch., Berl. Ent. Zeit., xxvii. (1883), p. 203.

Hab. Colombia.

26. Diabrotica viridipennis, Jacoby.

Cist. Ent., ii., p. 526.

Hab. Peru.

27. Diabrotica eximia, Baly.

Ann. and Mag. Nat. Hist., 5th ser., vol. iii., p. 74. *Hab.* Bolivia.

28. Diabrotica pulchra, Baly.

Trans. Ent. Soc. Lond., 1865, p. 345.

Diabrotica gloriosa, v. Harold, Mitt. Münch. Ent. Ver., 1877, p. 110.

Hab. Colombia.

#### 29. Diabrotica verrucosa, Jacoby.

Elongata, postice paullo ampliata, convexa, fulvo-testacea, nitida, capite nigro, antennis apice pedibusque flavis, scutello thoraceque rufis, hoc trifoveolato; elytris modice convexis medio transversim depressis, ad apicem subventricosis rude rugulosis, viridi-æneis, fascia vix pone medium limboque externo flavis.

Var. A. Elytrorum fascia obsoleta. Jacoby, Proc. Zool. Soc., 1880, p. 603, pl. lv., fig. 1.

Var. B. Antennis flavis articulis intermediis nigris.

Var. C. Antennis totis flavis.

Mas. Elytris vitta curvata elevata ante apicem prope suturam posita instructis.

Hab. Ecuador (Buckley).

Head not longer than broad, triangular; elypeus with a distinct longitudinal ridge; antennæ filiform, shorter than the body, the second joint short, the third more than twice its length, rather shorter than the fourth. Thorax one-half broader than long; sides sinuate behind the middle, rounded and converging towards the apex; anterior and hinder angles subacute; disk trifoveolate, the middle fovea placed behind the others, and ill-defined. Elytra oblong, slightly dilated posteriorly, convex, transversely depressed across the middle, subventricose posteriorly, coarsely rugose.

The above insect is very nearly allied to *D. Erichsoni*, Baly. It differs in its somewhat larger size, and in the coarser punctuation and brighter colour of its elytra. The two are possibly extreme forms of the same species. [Baly.]

# 30. Diabrotica Erichsoni, Baly.

Ann. and Mag. Nat. Hist., 3rd ser., iv., p. 272 (1859).

Elongata, postice paullo ampliata, modice convexa, fulva aut rofo-fulva, nitida, capite antennisque, articulis ultimis quatuor exceptis, nigris; thorace trifoveolato, fovea intermedia parva; elytris oblongis, modice convexis, medio late transversim depressis, crebre punctatis, subrugulosis, obsolete tricostatis, his costis interdum totis obsoletis; plumbeis aut sordide viridi-æneis, limbo externo flavo.

Mas. Elytris utrisque creta elevata, leviter curvata ante apicem prope suturam posita.

# Hab. Ecuador; banks of the Napo, Upper Amazons.

Head longer than broad, wedge-shaped; clypeus with a faint longitudinal ridge, which extends downwards nearly to the apical margin; antennæ filiform, obsoletely thickened towards the apex, four-fifths the length of the body, the four outer joints yellowish white. Thorax nearly twice as broad as long; sides sinuate behind the middle, rounded and slightly converging anteriorly; above convex, disk broadly excavated, trifoveolate, the middle fovea much smaller than the others. Elytra oblong, very slightly dilated posteriorly, their apices conjointly regularly rounded; above moderately convex, faintly depressed transversely across the middle, finely rugulose, closely punctured; on the middle disk of each elytron are three very fine ill-defined longitudinal costæ, which in some specimens are entirely obsolete. [Baly.]

#### 31. Diabrotica Batesi, Baly.

Ann. and Mag. Nat. Hist., 3rd ser., iv., 1859, p. 271. Hab. Amazons.

# 32. Diabrotica vespertina, Baly.

Ann. and Mag. Nat. Hist., 3rd ser., iv., p. 271.

Elongata, postice paullo ampliata convexa, fulvo-flava, nitida, capite nigro; antennis apice albidis, scutello nigro-piceo; thorace quam longo fere duplo latiori disco late excavata utrinque magis fortiter excavato; elytris oblongis, viridiscente purpureo-metallicis, crebre et fortiter punctatis, rugulosis.

MAS. Antennarum articulis quatuor leviter incrassitis; elytris utrisque ante apicem prope suturam erecta elevata medio torulosa instructis.

Long. 4-5 lin.

# Hab. Ecuador; banks of the Napo River (Buckley).

Head triangular, not longer than broad; clypeus with a narrow elevated ridge, which extends downwards rather below the middle, and there terminates on a broad ill-defined elevation, which extends obliquely outwards on either side; the surface above this transverse elevation granulose, subremotely punctured, the space below shining, impunctate; antennæ rather shorter than the body. robust in the 3, rather more slender in the other sex, filiform, the four upper joints slightly thickened in the 3; the second joint short, obconic; the third more than twice its length, scarcely shorter than the fourth; black, the four upper joints vellowish white. Thorax nearly twice as broad as long; sides broadly margined, deeply sinuate behind the middle, rounded and slightly dilated anteriorly, converging towards the apex, the anterior and posterior angles obtuse; upper surface abruptly deflexed on the sides, flattened and broadly excavated on the disk; the excavation impressed with a shallow ill-defined fovea on either side, in some specimens is also a third fovea, small and ill-defined; this fovea is often entirely obsolete. Scutellum triangular, its apex acute. Elytra narrowly oblong, very slightly dilated posteriorly, their apices conjointly, rather obtusely rounded; above convex, not excavated below the basilar space, closely and strongly punctured, the interspaces rugulose, irregularly and transversely wrinkled on the middle disk; on each elytron in the 3, placed towards the apex near the suture, is a strongly raised, slightly curved, longitudinal ridge, the middle of which is occupied by a large obtuse tuberosity; the space between the two ridges concave, shining, impunctate. [Baly.]

# 33. Diabrotica azureipennis, Gahan, sp. n.

Diabrotica azureipennis (Dej.).

Flavo-testacea, capite antennis (articulis tribus ultimis albidis exceptis) tibiis tarsisque nigris, elytris cyaneis vel violaceis; prothoracis dorso transversim impresso, nitido, vix punctato; elytris fortiter confertissimeque punctatis. Long. 6—7 mm.

#### Hab. Cayenne.

Head black, with the under side and palpi yellowish. Antennæ black, with the last three joints whitish; fourth joint almost as long as the second and third united; the third twice as long as the second. Prothorax nearly twice as broad as long; sides simuate and slightly diverging from the base to beyond the middle, thence converging to the apex; disk with a transverse depression in the

middle. Elytra strongly and very closely punctured; dark blue or violaceous. Body underneath and femora yellowish, tibiæ and tarsi black. Each elytron in the male with a short slightly curved carina near the suture posteriorly.

34. Diabrotica ornata, Baly.

Ann. and Mag. Nat. Hist., 3rd ser., iv., p. 273. Hab. Peru.

35. Diabrotica adonis, Baly.

L. c., p. 272.

Hab. Venezuela, Colombia; also Panama.

36. Diabrotica denotata, Gahan, n.n.

Diabrotica bipartita, Baly, P. Z. S., 1889, p. 95, nec Jacoby, Biologia C. A., p. 508.

Oblonga, postice ampliata, convexa, flava, nitida; capite, scutello thoraceque nigris, hoc transversim sulcato, basi piceo margmato; antennis flavis, articulis basali et intermediis nigris; elytris oblongis, postice paullo ampliatis, convexis, infra basin excavatis, sat crebre punctatis, dimidio antico, margine excepto, viridi-æneo; prope medium fascia elevata et pone fasciam sulco transverso viridi-æneo instructis.

Mas. Elytris ante apicem prope suturam, vitta obsolete elevata instructis.

Long. 4 lin.

Hab. Eastern Ecuador (Buckley).

Head trigonate; antennæ with the third joint three times the length of the second, scarcely shorter than the fourth; the basal joint, together with the fifth, sixth, and seventh, black; the second to the fourth flavous, stained with piceous; the eighth and following ones pale flavous. Thorax twice as broad as long; sides nearly parallel and sinuate from the base to the middle, thence slightly converging towards the apex; disk shining, impunctate, impressed across the middle with a broad transverse sulcation, which is more deeply excavated at either end. Elytra oblong, dilated posteriorly, moderately convex, excavated below the basilar space, distinctly and rather closely punctured; flavous, the anterior disk (the outer margin excepted), together with a transverse sulcation immediately behind the middle, metallic-green; this sulcation, which extends

entirely across the elytron, is bounded anteriorly by a narrow flavous ridge. [Baly.]

37. Diabrotica suturalis, Baly.

Trans. Ent. Soc. Lond., 3rd ser., ii., 1865, p. 348. Hab. Cayenne, Brazil.

# 38. Diabrotica triplagiata, Baly.

Elongata, postice paullo ampliata, modice convexa, flava, nitida, capite nigro, antennis apice flavo-albidis; thorace trifoveolato nigro-cupreo, lateribus pallide flavis; elytris pallide flavis, utrisque plaga magna communi a basi fere ad medium extensa, ad latus abbreviata alteraque pone medium utrinque abbreviata nigro-cupreis.

Diabrotica triplagiata, Baly, Ann. & Mag. Nat. Hist., October, 1859, p. 272.

Var. A. Elytris nigro-cupreis, limbo externo, apice ampliato fasciaque mediali pallide flavis.

Diabrotica trabeata, Kirsch., Berl. Ent. Zeit., xxvii., 1883, Heft 11, p. 201.

Var. B. Elytrorum fascia mediali obsoleta, cæteris ut in Var. A. Mas. Elytris utrisque pone medium prope suturam carina brevi elevata instructis.

Hab. Ecuador; banks of the River Napo (Stobel, Buckley). Type and var. A, Upper Amazons; var. B (Staudinger).

I cannot separate *D. trabeata*, Kirsch., whose type-specimen I have before me, from *D. triplagiata*, mihi, and have therefore placed the two forms under a single head. *D. fraterna*, an insect closely resembling in coloration the present species, I found on subsequent examination to belong to the genus *Dircema*, Clark. [Baly.]

39. Diabrotica flavomarginata, Baly.

Journ. Linn. Soc., xix., p. 234.

Hab. Colombia, Magdelaine, Bogota.

40. Diabrotica coccinea, Baly.

Trans. Ent. Soc. Lond., 1865, p. 345.

Var. A. Supra pallide piceo-fulva, cæteris ut in typo.

Var. B. Pectore abdomineque nigris, cæteris ut in var. A.

Hab. Colombia, Magdalena River (type); Cauca (vars. A and B).

The present species is very similar in form to *D. elongata*, Duviv.; it may be known by its smaller size, by the strongly torulose elytra, and by the presence of a third transverse sulcation behind the middle of the latter. [Baly.]

#### 41. Diabrotica elongata, Duviv.

Comptes rend. de la Soc. Ent. Belgique, 1887, tom. xxxi., p. xlvii.

Elongata, postice ampliata, convexa, nitida, subtus nigra pedibus piceis; supra picea, elytris apice antennisque sordide fulvis, scutello nigro; thorace quam longiori vix latiori, lateribus sinuatis, disco bifoveolato; elytris infra basin et prope medium transversim depressis, tenuissime punctatis.

Var. A. Pedibus antennisque nigro-piceis, cæteris ut in typo.

Hab. Colombia, Cauca.

Head longer than broad, wedge-shaped; clypeus with a distinct longitudinal ridge; labrum black; antennæ filiform, three-fourths the length of the body, the second joint short, the third more than twice its length, nearly equal to the fourth. Thorax slightly broader than long; sides slightly produced and rounded just before the middle, rather deeply sinuate behind the latter; above moderately convex, rather abruptly deflexed on the sides, shining, very minutely punctured, the punctures only visible under a lens; disk impressed on either side with a large round fovea. Elytra subelongate, gradually dilated posteriorly, their apices conjointly regularly rounded; above convex, minutely punctured, transversely excavated below the basilar space and again across the middle, the space between these depressions thickened.

This species differs from *D. coccinea*, Baly, in the absence of the third transverse depression on the elytra, present in the latter insect, and in the surface between the sulcations being much less strongly thickened. [Baly.]

42. Diabrotica æneipennis, Baly.

Journ. Linn. Soc., xix., p. 234.

Hab. Colombia.

# 43. Diabrotica cribrata, Gahan, sp. n.

Sordide flava, antennis (articulo primo subtus excepto) tibis tarsisque nigris, elytris viridis vel viridi-cyaneis; capite subnitido; prothorace transverso, nitido, impunctato, dorso utrinque leviter vel obsolete foveolato-impresso; elytris creberrime fortiterque punctatis. Long. 8—9 mm.

# Hab. Brazil—Petropolis (J. Gray).

Antennæ black, with the scape underneath yellow; third joint twice as long as the second, and scarcely shorter than the fourth. Head yellow, somewhat glossy and impunctate; the face rather short, with an obtuse transverse elevation below, from which a very short median ridge passes as far as between the insertion of antennæ. Prothorax yellow, transverse, with the lateral margins very feebly curved in the middle, and slightly projecting in a short blunt process at each of the four angles; the disk glossy and impunctate, and very faintly impressed on each side. Elytra metallic green or bluish green, strongly and very closely punctured; body underneath and femora yellow. Tibiæ and tarsi black.

# 44. Diabrotica cinctipennis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 449. *Hab.* Peru.

# 45. Diabrotica digna, Gahan, sp. n.

Flava; antennis tibiis tarsisque et elytris nigris, his limbo externo et apice flavis; prothorace transverso, nitido, bi-impresso; elytris fortiter creberrimeque punctatis. Long. 8 mm.

# Hab. Brazil, Petropolis, Rio Janeiro.

Antennæ filiform, slightly thickened towards the middle, black; the third joint about equal in length to the fourth. Head and prothorax yellow; the disk of the latter feebly punctured in places, and with two foveolate impressions. Elytra strongly and very closely punctured, black, with a marginal band, slightly increasing in width to the apex, flavous. Femora and under side of the body yellowish; tibiæ and tarsi black.

# 46. Diabrotica marginipennis, Gahan, sp. n.

Diabrotica marginipennis (Reiche MS.).

Sordide flava; antennis, tibiis, tarsisque, et elytris nigris, his marginibus lateralibus et apicalibus flavis; prothorace transverso

nitido, dorso tenuissime sparsissimeque punctato, utrinque leviter foveolato-impresso; elytris sub-nitidis, sat fortiter et dense punctatis. Long 6 mm.

Hab. Brazil, Rio Janeiro.

Antennæ filiform, black, with the third joint more than twice as long as the second, and about equal in length to the fourth. Prothorax transverse, yellowish, nitid; the disk with some feeble punctures towards the sides and base, and with a foveolate impression on each side of the middle. Elytra subnitid, thickly and somewhat strongly punctured, black, with a marginal band, widening slightly towards the apex, flavous. Legs and under-side of body sordid yellow; tibiæ and tarsi black.

This species closely resembles the preceding, but is smaller, with the elytra somewhat glossy, and their punctures not so strong nor so closely placed together.

# 47. Diabrotica albidocineta, Baly, sp. n.

Subelongata, postice paullo ampliata, convexa, nigra, nitida; femoribus, dorso exceptis, tibiis anticis, dorso exceptis, tibiis posticis apice, antennis apice, thoracis lateribus elytrorumque limbo externo, albidis; thorace transverso, lateribus ante medium paullo ampliatis, disco profunde bifoveolato, postice sat fortiter punctato; elytris crebre sat fortiter punctatis.

Long.  $6\frac{1}{2}$  mm.

Hab. Brazil.

Head triangular, not broader than long; clypeus with a strongly raised longitudinal ridge; antennæ filiform, very slightly thickened at the apex, nearly equal to the body in length, the second joint oblong-ovate, the third twice its length, equal to the fourth; black, the upper two joints, the apex of the terminal one excepted, white. Thorax more than one-half broader than long; sides rather broadly margined, sinuate and diverging to just beyond the middle, thence rounded and converging towards the apex, the anterior angles tuberculate, the hinder ones subacute; upper surface moderately convex; hinder disk impressed with two large deeply excavated subtrigonate foveæ, which are separated from each other by a narrow line; anterior disk shining, nearly impunctate, the hinder disk, together with the foveæ, strongly punctured. nigro-piceous. Elytra narrowly oblong, slightly dilated posteriorly, regularly rounded at the apices, convex, flattened along the suture, the humeral callus prominent; surface strongly and rather closely punctured, [Balv.]

48. Diabrotica flavocineta, Baly.

Journ. Linn. Soc., xix., p. 235.

Hab. Colombia.

49. Diabrotica Staudingeri, Baly.

Ent. Mo. Mag., xxv., p. 254.

Elongata, postice vix ampliata, modice convexa, nigra, nitida; femoribus, thoracis superficie inferiori lateribusque elytrorumque limbo externo apice ampliato, flavo-albidis; thorace quam longo vix latiori, fortiter punctato, disco obsolete excavato; elytris anguste oblongis, subcrebre fortiter punctatis.

Long. 9 mm.

Hab. Colombia, Cauca; a single specimen.

Head triangular, not longer than broad; elypeus with a strongly raised longitudinal ridge; antennæ slender, filiform, nearly equal to the body in length, the second joint shorter, the third twice its length, nearly as long as the fourth, the basal joint piceous beneath, the roots black. Thorax only slightly broader than long; sides rounded before the middle, sinuate behind the latter, the anterior angles thickened, obtuse, the hinder ones subacute; upper surface convex, obsoletely excavated on the middle disk, coarsely punctured; the extreme lateral border yellowish white. Elytra narrowly oblong, scarcely dilated posteriorly, their apices conjointly regularly rounded; above moderately convex, strongly punctured; subhumeral ridge obsoletely elevated, bounded within by a broad shallow sulcation. [Baly.]

# 50. Diabrotica limbatipennis, Baly.

# P. Z. S., 1889, p. 93.

Subelongata, postice vix ampliata, convexa, nigra, nitida; femoribus basi elytrorumque limbo externo flavo-albidis; thorace quam longo fere duplo latiori, dorso vix pone medium bifoveolato; elytris sat crebre punctatis, punctis apicem versus minus fortiter impressis, cæruleo-nigris, limbo externo late albidis.

Long.  $4\frac{1}{2}$  mm.

Hab. Brazil, New Friburg.

Head triangular, not longer than broad; elypeus with a strongly raised longitudinal ridge; sides vaguely punctured; antennæ filiform, nearly equal to the body in length, the second joint short, obovate, the third and fourth equal, each nearly twice the length of the second. Thorax nearly twice as broad as long; sides straight and nearly parallel from the base to beyond the middle, thence obliquely converging towards the apex, anterior and posterior angles acute; above convex, impressed on the hinder disk just behind the medial line of the thorax with two large foveæ. Elytra narrowly oblong, scarcely dilated posteriorly, regularly rounded at the apices, convex, not excavated below the basilar space, rather strongly punctured, the puncturing finer towards the apex; on each elytron, when viewed obliquely, are seen several faintly elevated longitudinal costæ. [Baly.]

51. Diabrotica abbreviata, Baly.

Journ. Linn. Soc., xix., p. 238. Hab. Colombia.

52. Diabrotica cinctella, Chevr.

Luperus cinctellus, Chevr., in Guér. Icon. règne anim., p. 304, pl. 49, bis. fig. 6.

"Niger, capite, thorace (foveis duabus), margine elytrorum femoribus primoque articulo antennarum infra luteis; elytris nitidis crebre punctatis." Long. 5 mm.

Hab. Brazil.

Head and prothorax sordid yellow; the disk of the latter rather closely punctured, with two foveolate depressions, which are sometimes united together transversely. Elytra closely and not very strongly punctured, nitid, black; with the outer border, slightly and angularly dilated at the apex, yellow. Body underneath (prothorax excepted), tibiæ, tarsi, and the tips of the femora above, black.

Var. Disk of prothorax with a median oblong black spot.

This species is most nearly allied to *D. limbifera*, Baly, from which it is to be distinguished by the black colour of its breast and abdomen. In its shape and coloration of its upper side, it has a strong resemblance to *D. cinctella*, Harold.

53. Diabrotica limbifera, Baly. Trans. Ent. Soc. Lond., 1879, p. 257. Hab. Peru.

54. Diabrotica brasiliensis, Jacoby. Notes Leyden Mus., vol. x. (1888), p. 156. Hab. Brazil.

55. Diabrotica dorsalis, Jac. Cist. Ent., ii., p. 523. Hab. Peru.

56. Diabrotica alternata, Baly. Journ. Linn. Soc., xix., p. 244. Hab. Colombia.

57. Diabrotica tæniolata, Gahan, sp. n.

Brunnea; antennis articulis octavo nonoque sordide albis; prothorace transverso, disco punctulato et bifoveolato; elytris crebre fortiterque punctatis, rufo-brunneis, marginibus externis sutura et vitta utrinque ab humero descendente, pallide flavis; femoribus basi abdominisque annulis flavo-testaceis. Long. 5½ mm.

Hab. Peru.

This species may be placed near *D. alternata*, Baly, from which it is to be distinguished by its reddish or chocolate-brown colour, and by the stronger and closer punctuation of its elytra. In *alternata* the legs are entirely yellowish; in the present species the tibiæ, tarsi, and the tips of the femora are reddish brown.

58. Diabrotica spiloptera, Baly. Journ. Linn. Soc., xix., p. 242. Hab. Colombia.

59. Diabrotica piceicollis, Baly. Trans. Ent. Soc. Lond., 1886, p. 453. Hab. Amazons.

60. Diabrotica melanospila, Gahan, n. n. Diabrotica spiloptera, Baly, P. Z. S., 1889, p. 92.

Anguste ovata, postice ampliata, convexa, nigra, nitida; femoribus, abdomine (hoc piceo tincto) elytrisque flavis; his distincte minus crebre punctatis, utrinque plagis tribus prime infra basin

callum humeralem posita, trigonata, secunda prope medium transversa, tertiaque pone medium subrotundata, nigris ornatis.

Long.  $4\frac{1}{2}$  mm.

Hab. Brazil.

Head not longer than broad, triangular; clypeus smooth, impunctate; antennæ filiform, obsoletely thickened towards the apex, the second joint short, ovate, the third nearly twice its length, the fourth slightly longer than the third; the two lower joints glabrous, the rest clothed with fuscous hairs. Thorax about one-fourth broader than long; sides broadly margined, nearly straight, and very slightly diverging from the base to beyond the middle, thence rounded and converging towards the apex, the anterior angles rounded, the hinder ones subacute; above convex, rather abruptly deflexed on the sides, flattened on the middle disk, subremotely punctured. Elytra ovate, dilated posteriorly, their apices regularly rounded above, convex, not depressed below the basilar space, rather strongly punctured, the outer limb broad. [Baly.]

# 61. Diabrotica significata, Gahan, sp. n.

Diabrotica signifera, Chev. MS., nec Jac. D. 15-maculata (Dej.).

Oblongo-ovata, flava, nitida; capite obscure rufo; antennis articulo primo flavo, ceteris ferrugineis vel fuscis; prothorace dorso convexo, maculis duabus brunneis ornato; scutello piceo-rufo; elytris flavis, maculis tredecim brunneis—una communi elongata pone scutellum, una utrinque ad humerum, duabus utrinque ante, duabus pone medium, una minuta utrinque prope apicem; prosterno, abdomine pedibusque testaceo-flavis; pectore ferrugineo vel fusco. Long. 6 mm.

Var. Elytris fere omnino flavis.

Hab. Brazil, Bahia.

Head dark red, somewhat glossy. Antennæ with the first joint yellow, the remaining joints reddish brown or dark brown, with the third and following joints subequal, each rather more than twice as long as the second. Prothorax a little broader than long, yellow, nitid, and marked on the disk with two brownish spots. Elytra yellowish, glossy, almost impunctate, with, usually, thirteen brownish or reddish brown spots, of which one, common, elongate, and spatulate, is placed behind the scutellum, one on each side just over the shoulder, two on each side before the middle, which are often confluent, two on each side behind the middle, and one very small spot close to the suture on each side near the apex. In one

TRANS. ENT. SOC, LOND. 1891 —PART III. (OCT.) 2 G

or two specimens the small posterior spots are wanting. In another the three outer spots of each elytron are united to form a longitudinal band. Again, there is a variety in which the elytra are almost wholly flavous, the brown being restricted to a very short sutural line behind the scutellum, and a short broken vitta passing back from each shoulder.

#### 62. Diabrotica maculatipennis, Baly, sp. n.

Anguste ovata, postice paullo ampliata, convexa, flava, nitida, pectore capiteque nigris, antennis basi piceis apice piceo-fulvis, scutello piceo; thorace quam longo paullo latiori, convexo, minute subremote punctato, fulvo-rufo; elytris subcrebre punctatis, utrisque maculis sex nigris ornatis.

Long.  $5-5\frac{1}{2}$  mm.

Hab. Brazil, Tejuca (Gray).

Head triangular, not longer than broad; clypeus with a strongly elevated ridge; antennæ nearly equal to the body in length, filiform, the second joint short, subovate, the third twice its length, nearly as long as the fourth, the first and fourth joints piceous, the second and third, together with the three upper ones, piceo-fulvous. Thorax scarcely one-fourth broader than long; sides straight and parallel from the base to beyond the middle, thence slightly converging towards the apex, the hinder and anterior angles obtuse; upper surface convex, finely and subremotely punctured. Elytra ovate, moderately dilated posteriorly, the apices conjointly rounded; above convex, obsoletely depressed on the suture below the basilar space, distinctly punctured; each elytron with six black or nigropiceous markings, one basal, linear, placed on the suture, common, and extending for nearly one-third of its length, a second large, subovate, covering the humeral callus, two very small, placed transversely near the middle of the disk, and two rather larger, placed transversely and somewhat obliquely half-way between the middle and the apex. [Baly.]

#### 63. Diabrotica nigropunctata, Gahan, sp. n.

Oblongo-ovata, postice paullo ampliata, convexa, nigra, prothorace elytrisque fulvis; prothorace crebre obsoleteque punctato, nitido; elytris crebre punctatis, utrisque punctis sex nigris. Long.  $5\frac{1}{2}$  mm.

Hab. Brazil.

Head black, clypeus with a rather feebly raised longitudinal carina. Antennæ black, more than half the length of the body;

third joint twice as long as the second, and about equal in length to the fourth. Prothorax about half as broad again as long; sides parallel and feebly sinuate from the base to beyond the middle, thence converging to the apex; the anterior angles slightly tuberculate; upper surface convex, closely but somewhat indistinctly punctured. Scutellum black. Elytra closely punctured, fulvous, each with six small somewhat rounded black spots, one on the humeral callus, one on the disk nearly half-way between the basal margin and the middle, two placed transversely at about the middle, the remaining two placed slightly obliquely between the middle and the apex.

The above characters apply to two specimens in the B. M. collection. In a specimen from Parana, with somewhat shorter antennæ, the clypeus has a more distinct longitudinal carina, and the upper surface of the prothorax is very distinctly punctured. These differences are perhaps sexual. I cannot regard them as specific, the agreement in other respects being so extremely close.

#### 64. Diabrotica biseriata, Gahan, sp. n.

Oblongo-ovata, postice ampliata, sordide fulva, capite antennis (his basi apiceque exceptis) pectore et maculis octo subquadratis elytrorum (quatuor ad basin transversim—quatuor versus apicem subarcuatim—positis) nigris; prothoracis dorso nitido, obsolete punctulato, antice utrinque bifoveolato; elytris crebre punctulatis, utrisque pone humerum longitudinaliter subsulcatis. Long. 7—9 mm.

# Hab. Brazil, Parana.

Head black, rather short in front, with a median foveolate impression above the insertion of the antennæ; these rather longer than half the body, black, with the first three joints, the last two joints, and the under side of the fourth joint, fulvous; third joint almost three times as long as the second, and nearly equal in length to the fourth. Prothorax with length to breadth as 3 to 2; disk nitid, obsoletely punctulate, with a feeble foveolate impression on each side before the middle. Elytra closely punctate, with a short and feeble longitudinal groove on each side behind the shoulder; each with four somewhat square or oblong black spots, two placed transversely at the base, two slightly obliquely between the middle and the apex; with the parts surrounding the black spots somewhat paler in colour than the rest of the surface. Breast black; legs and rest of the under side of the body fulyous.

# 65. Diabrotica humeralis, Gahan, sp. n.

Fulvo-testacea; capite metasternoque nigris, antennis medio apiceque infuscatis; prothoracis dorso impunctato, nitido, obsolete tri-impresso; elytris dense distincteque punctatis, utrisque vittis brevibus duabus (una marginali, altera dorsali) antice ad humerum conjunctis, et maculis duabus, pone medium obliquiter positis, nigro-cyaneis. Long.  $6\frac{1}{2}$  mm.

#### Hab. Peru.

Head black. Prothorax testaceous, nitid, almost impunctate, and with three very faint and almost obsolete impressions on the disk; sides straight and nearly parallel from the base to the anterior third, thence converging anteriorly. Elytra dilated posteriorly, thickly and rather strongly punctured; each with two short vittæ, one along the margin below the shoulder, the other on the disk above the shoulder, which are united in front, and with two spots, obliquely placed between the middle and the apex, dark blue.

# 66. Diabrotica bistrigata (Reiche MS.), sp. n.

Ovata, postice paullo dilatata; capite nigro; antennis medio fuscis, basi apiceque fulvis; prothorace testaceo, disco convexo levi vix punctato; elytris dense punctulatis, flavis, sutura breviter pone scutellum et vitta utrinque ab humero descendente et postice abbreviata nigro-fuscis; corpore subtus (pectore nigro excepto) pedibusque flavis.

Long. 5-6 mm.

# Hab. Brazil: Petropolis, Constancia, Tejuca (H. Clark and J. Gray).

Head black; antennæ dark brown, with the two or three last and usually also the first two or three joints fulvous. Prothorax testaceous, the disk smooth, convex, and almost impunctate. Elytra thickly and finely punctured, yellow, with the suture for a short distance behind the scutellum and a vitta on each side from the shoulder extending to about the beginning of the apical third, and often interrupted a little before its extremity, brownish black.

This species resembles some in the first section, but is easily to be distinguished by the relative length of the third antennal joint. This joint is more than twice as long as the second, and is quite equal in length to the fourth.

# 67. Diabrotica interruptolineata, Baly.

#### P. Z. S., 1889, p. 91.

Ovata, postice ampliata, convexa, fulvo-flava, nitida; pectore, scutello, capitis vertice, ore antennisque nigris, his apice albidis; thorace lævi; elytris crebre punctatis, flavis, utrisque linea discoidali, pone basin late interrupta, longe ante apicem abbreviata, alteraque submarginali, a basi fere ad apicem extensa nigris.

Long. 8 mm.

# Hab. Brazil, Tejuca (Gray).

Head triangular, not longer than broad; clypeus with a broad longitudinal ridge; antennæ four-fifths the length of the body, filiform, the second joint short, submoniliform, the third more than twice its length, distinctly longer than the fourth; black, the three outer joints yellowish white, the basal joint, and in some specimens the following one, piceous, stained above with black. Thorax scarcely one-half broader than long; sides nearly straight and slightly diverging from the base to beyond the middle, thence rounded and converging towards the apex, the anterior angles thickened, subtuberculate, the hinder ones acute; disk concave, shining, impunctate. Elytra oblong-ovate, dilated posteriorly, regularly rounded conjointly at the apices; convex, not excavated below the basilar space, closely and rather strongly punctured, obsoletely rugulose. [Baly.]

# 68. Diabrotica delicula, Erichs.

Wieg. Archiv. für Naturg., 1847, i., p. 169. Hab. Peru.

# 69. Diabrotica 10-verrucata (Chev. MS.), sp. n.

Capite nigro, subnitido; antennis fusco-ferrugineis articulo basali piceo; prothorace fulvo, nitido, dorso convexo impunctato; elytris sat dense punctulatis, nigris, singulis maculis quinque fulvis (2, 2, 1) posteriore maxima rotundata; corpore subtus (prothorace excepto) pedibusque nigris. Long. 6 mm.

#### Hab. Brazil (Porto Allegro).

Head black and somewhat glossy. Antennæ dusky ferruginous, with the basal joint pitchy brown and shining. Prothorax transverse, fulvous; disk convex, smooth and impunctate. Elytra slightly dilated posteriorly, very finely and rather thickly punctured, black; each with five fulvous spots, of which two are in front of the middle, two at or just behind the middle, the fifth,

larger and more rounded, near the apex. The legs and the under side of the body, the prothorax excepted, are black.

This species looks, at first sight, somewhat like D. Chevrolati, Har., but is very distinct.

70. Diabrotica Chevrolati, Harold.

Col., Hefte xiii., 1875, p. 93.

Hab. Colombia.

71. Diabrotica Volxemi, Baly.

Ent. Mo. Mag., xxv., p. 253.

Ovata, postice ampliata, convexa, nigro-cuprea, nitida, antennis nigris; thorace bifoveolato, subcrebre punctato; elytris tenuiter punctatis, fulvis, limbo externo, sutura maculisque irregularibus, hic illic inter se confluentibus, nigro-cupreis.

Long.  $6\frac{1}{2} - 7\frac{1}{2}$  mm.

Hab. Brazil (Van Volxem).

Head triangular, scarcely longer than broad; clypeus finely punctured, its medial line with an impunctate longitudinal ridge; antennæ filiform, the second joint short, obovate, the third nearly twice its length, the fourth scarcely longer than the third; black, the bases of the three or four lower joints piceous. Thorax about one-half broader than long; sides slightly sinuate and slightly diverging from the base, thence obliquely rounded and converging towards the apex, the anterior angles tuberculate, the hinder ones acute; upper surface moderately convex, distinctly and rather closely punctured; disk impressed on either side with a deep round fovea. Elytra broadly ovate, dilated posteriorly, their apices conjointly regularly rounded, moderately convex, not impressed below the basilar space, minutely punctured. [Baly.]

72. Diabrotica Deyrollei, Baly.

Trans. Ent. Soc. Lond., 3rd ser., ii. (1865), p. 347; Journ. Linn. Soc., xix., p. 241.

Hab. Colombia.

73. Diabrotica eneiventris, Baly.

P. Z. S., 1889, p. 91.

Anguste ovata, postice ampliata, convexa, nigro-ænea, nitida, tibiis, tarsis, scutello capiteque nigris, antennis basi piceo-fulvis,

articulis apicalibus quatuor, ultimi apice excepto, pallide flavis; thorace, femoribusque flavis, his dorso nigro-lineatis; thorace obsolete tri-impresso; elytris tenuiter sat crebre punctatis, viridiæneis, utrisque limbo externo, maculis duabus infra basin, transversim positis, fascia curvata vix pone medium, utrinque abbreviata, maculaque subapicali ad limbum adfixa, flavis.

Long. 11 mm.

# Hab. Banks of Napo.

Head longer than broad, wedge-shaped; clypeus with a distinctly elevated longitudinal ridge; antennæ filiform, more than half the length of the body, the second joint short, the third twice its length, nearly as long as the fourth; black, the four lower joints piceo-fulvous, stained above with nigro-piceous, the four upper ones, the apex of the apical one excepted, pale flavous. Thorax twice as broad as long; sides straight and nearly parallel from the base to beyond the middle, thence obliquely converging towards the apex, all the angles slightly produced, acute; disk transversely convex, finely but subremotely punctured; disk impressed transversely on either side with a shallow oblong fovea, medial line impressed at the base with a short longitudinal groove. Elytra narrowly oblong, dilated posteriorly, regularly rounded conjointly at the apex, convex, slightly flattened along the suture, finely and rather closely punctured. [Baly.]

# 74. Diabrotica Reichei, sp. n.

# Diabrotica glauconotata (Reiche MS.).

Pallide-olivacea; capite, metathorace tibiis tarsisque et elytris nigris, his limbo externo et maculis tribus magnis utrinque flavo-olivaceis, antennis articulis 20 ad 6um fuscis, sequentibus fulvo-ferrugineis; prothorace quam longitudine vix latiore, lateribus sub-parallelis, medio leviter sinuatis; dorso leviter convexo, nitido, obsolete punctulatis, elytris oblongo-ovatis dense punctulatis. Long. 9 mm.

# Hab. Ecuador and Colombia.

Head black; front rather short, with a median ridge passing from the raised clypeal margin to a point between the insertion of the antennæ. Antennæ with the basal joint yellowish, the following joints to the sixth dark brown, the remaining joints fulvous red; with the third joint twice as long as the second, and almost equal in length to the fourth. Prothorax almost as long as broad, slightly convex on the disk, glossy and obsoletely punctu-

late; sides nearly parallel, feebly sinuate in the middle, slightly converging at the apex. Elytra black, thickly and finely punctured; each with a short longitudinal groove behind the shoulder, with the outer margin and three large spots pale olivaceous yellow. The first spot is near the base, the second transverse and touching on the outside the marginal band, is placed at the middle, the third is quite at the apex, where it joins the marginal band; the latter is slightly expanded opposite the interval between the two anterior spots. The femora and the under side of the body, the metathorax excepted, are greenish testaceous.

This species resembles in coloration *D. viridimaculata*, Jac., but may be distinguished by its larger size, and the relative length of the third joint of its antennæ.

75. Diabrotica Steinheili, Baly.

Journ. Linn. Soc., xix., p. 240.

Hab. Colombia.

76. Diabrotica 10-guttata, Oliv.

Entom., vi., p. 651, tab. iv., fig. 63.

Anguste oblonga, postice paullo ampliata, convexa, subtus flava, pectore tibiis tarsisque piceis; supra picea aut nigro-picea, thorace, scutello antennarumque articulis subapicalibus flavis; elytris oblongis, postice paullo ampliatis tenuiter, crebre punctatis, utrisque limbo exteriori maculisque quinque, 2, 2, 1 dispositis, flavis.

Var. A. Capite cum antennis flavis.

Var. B. Elytrorum limbo disco concolori.

Var. C. Elytrorum maculis inter se confluentibus.

Var. D. Elytris totis flavis.

Mas. Antennis articulis tertio ad quintum elongatis, paullo incrassatis; tibiis intermediis curvatis, apice acutis.

FEM. Antennis filiformibus articulis intermediis non incrassatis; tibiis intermediis simplicibus.

Long. 8-9 mm.

Hab. Cayenne, Amazons, Peru; Bahia (Olivicr).

Antennæ nearly equal to the body in length, the third joint nearly three times the length of the second, only very slightly shorter than the fourth, the latter equal to or slightly longer than the fifth, the third, fourth, and fifth in the  $\mathcal S$  longer than the following ones, and slightly thickened. Thorax twice as broad as

long; sides obliquely converging from the base to the apex, obsoletely bisinuate and angulate near the middle, the basal angle produced, subacute; above transversely convex, slightly flattened on the hinder disk, shining, impunctate. Elytra closely but finely punctured.

This species is very variable in the coloration of the head and elytra; the form passes through all the intermediate degrees from nigro-piceous to flavous. The elytra vary equally. I do not possess a specimen exactly agreeing with the description given by Olivier, but have little doubt that specimens similarly coloured do occur. [Baly.]

# 77. Diabrotica Belemea (Reiche MS.), sp. n.

Flavo-testacea vel fulva; capite supra nigra, antennis fuscis, articulis basalibus brunneis vel flavo-brunneis, articulis 70 et 80 albescentibus; prothorace transverso, ante basin obsolete transversim depresso, lateribus leviter bisinuatis, disco subtiliter haud dense punctulatis; elytris crebre punctulatis, nigro-fuscis, limbo externo, margine basali, macula utrinque prope basin, fascia transversa vix pone medium ad suturam angustim interrupta, et macula utrinque ante apicem, flavis vel fulvis; corpore subtus (lateribus pospectoris exceptis) femoribusque flavis, tibiis tarsisque infuscatis.

MAS. Articulis antennarum 30, 40 et 50 leviter crassatis, tibiis intermediis leviter curvatis vix ante apicem subtus angulato-dilatato; articulo primo tarsi antici dilatato et subelongato. Long. 6—8 mm.

Hab. Pará (or Belem).

In structural characters this species comes nearest to *D. spectabilis*, Baly, but is easily to be distinguished from that species by the colour and marking of the elytra. The marking of the elytra is apt to vary, without, however, in any case resembling that of *spectabilis*. In one variety the elytra are yellowish, with the suture, the extreme apex, and a submarginal vitta, dilated on the inner side at its posterior extremity, dark brown. The colour of the head is also variable; in some specimens the front is black, and the upper side, except around the eyes, testaceous.

#### 78. Diabrotica spectabilis, Baly, sp. n.

Ovata, postice ampliata, convexa, flavo-fulva, nitida, pectore capiteque nigris, antennis basi fulvis, articulis octavo et nono totis

decimoque basi albidis; tibiis tarsisque nigro-piceis; thorace quam longo fere duplo latiori, convexo, lævi; elytris rude punctatis, subnitidis, nigris, utrisque maculis duabus infra basin transversim positis, una ante apicem, lineaque transversa prope medium, utrinque abbreviata albidis.

Mas. Antennarum articulis tertio ad quintum elongatis, inter se æqualibus, leviter incrassatis; tibiis intermediis curvatis, apice incrassatis, obtusis.

Long.  $8\frac{1}{2}$  mm.

Hab. Upper Amazons, Nauta (Bates).

Head not longer than broad, triangular, black, the cheeks and mouth flavous; clypeus with a strongly elevated longitudinal ridge; antennæ in the 3 (the only sex known to me) slightly exceeding the body in length; the second joint short, subovate, the three following ones equal, slightly thickened, cylindrical, each more than twice as long as the second, the sixth to the eleventh shorter and more slender, equal to each other in length; the basal joint piceous, the seventh, eight, and basal portion of the ninth yellowish white, the rest black. Thorax nearly twice as broad as long at the base; sides nearly parallel and faintly sinuate from the base to the middle, thence very slightly and obliquely converging towards the apex, the anterior angles slightly produced, obtuse, the hinder ones acute; upper surface transversely convex, very slightly flattened on the hinder portion of the middle, minutely but not closely punctured; sides rather abruptly deflexed. Elytra oblong, slightly dilated posteriorly, regularly rounded at the apex; above convex, rather coarsely punctured, the interspaces subrugulose.

Separated from *D. 10-guttata* by the more slender antennæ, and by the apices of the intermediate pair of tibiæ being obtuse, not acuminate. I only know two specimens, both males, from the Upper Amazons. [Baly.]

#### 79. Diabrotica conformis, sp. n.

Capite supra nigro, subtus testaceo; antennis fuscis, articulis 60 ad 8um albescentibus; prothorace transverso, sat dense subtiliterque punctulato, testaceo; elytris crebre punctulatis, subnitidis, nigris, utrisque margine basali et maculis tribus (una ante medium, una vix pone medium, tertia prope apicem) flavo-albescentibus; corpore subtus (post-pectore excepto) fulvo; tibiis tarsisque et apicibus femorum quatuor posteriorum, infuscatis.

Long. 6—7 mm.

Mas. Antennis articulis 30—5um leviter incrassatis; tibiis intermediis tertia parte apicali leviter sed manifeste dilatata.

Hab. Amazons, Santarem; Cayenne, and Colombia, Cauca.

This species is somewhat variable. In the single specimen from Cayenne the spots of the elytra are larger, and the punctuation of the thorax somewhat stronger than in typical examples. In the two specimens from Colombia, each elytron has, instead of a spot, a narrow transverse band near the middle. This variety has a close resemblance to *D. spectabilis*, Baly.

The male of the present species has the first joint of the anterior tarsi slightly elongated, but scarcely dilated, and has rather more than the distal third of the intermediate tibiæ thickened. By these characters it may be easily distinguished from the same sex of *D. specta*-

bilis.

80. Diabrotica delecta, Gahan, n. n.

Diabrotica leucospila, Baly MS., nec Baly, Journ. Linn. Soc., xix., p. 253.

Anguste ovata, postice ampliata, convexa, flava, nitida; tibiis anticis dorso, posticis quatuor totis, tarsis, pectore, scutello, capiteque nigris, aut nigro-piceis, facie inferiori antennarumque articulis sexto ad nonum albidis; thorace quam longo plus dimidio latiori, transversim convexo, lævi; elytris distincte sed tenuiter punctatis, utrisque limbo externo ad apicem abbreviata, maculis duabus subrotundatis, una infra basin, una ante apicem fasciaque pone medium utrinque abbreviata, albidis.

Mas. Antennarum articulis tertio ad quintum elongatis, paullo incrassatis; femoribus intermediis subtus obsolete tuberculatis; tibiis ejusdem paris pone medium incrassatis.

Long. 7 mm.

Hab. Amazons, Nauta (Bates).

Head slightly longer than broad, subcuneiform; clypeus with a broad longitudinal ridge, the lower half of which is triangularly dilated; the lower face white, the labrum and jaws pale piceous; antennæ in the 3 slightly exceeding the body in length, the second joint nearly twice as long as broad, obovate, the third, fourth, and fifth each more than twice the length of the second, slightly thickened, cylindrical; the sixth to the eleventh shorter and more slender than the preceding ones, nearly equal, the sixth to the ninth yellowish white. Thorax more than one-half broader than

long; sides very slightly converging from the base to the middle, thence more strongly converging and sinuate towards the apex, the anterior and posterior angles produced, the former thickened, obtuse, the latter subacute; upper surface transversely convex, obsoletely excavated on the hinder disk, impressed subremotely with large shallow punctures. Elytra oblong, slightly dilated posteriorly, regularly rounded at the apices, convex, distinctly punctured, the interstices smooth. [Baly.]

# 81. Diabrotica nigrovittulata, Baly.

Journ. Linn. Soc., xix., p. 242.

Hab. Colombia, Venezuela.

Mr. Baly described this species from a single male specimen from Colombia, but he has omitted some important characters of this sex, viz.: Antennæ with the third, fourth, and fifth joints somewhat thickened, the fifth joint nearly twice as long as the sixth. Intermediate femora with a small tubercle on the under side just below the middle; intermediate tibiæ somewhat dilated from the middle up to the apex, with the ventral side somewhat angulate at the point where the dilatation begins.

The bands on the elytra in this species are subject to variation. In a specimen from Venezuela the posterior median vitta is wanting, and the two external vittæ of each elytron are united to form one long submarginal black band. A second specimen from Colombia differs from the type in having the three anterior bands united behind, while a broad transverse fascia joins the anterior

ends of the three posterior vittæ.

# 82. Diabrotica paraensis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 452.

Mr. Baly has not mentioned the following characters of the male:—Antennæ with the third, fourth, and fifth joints somewhat thickened. Intermediate femora each with a small tubercle on the under side at about the beginning of the distal third. Intermediate tibiæ angulate on the under side above the middle, and from thence dilated as far as the apex.

# 83. Diabrotica zelota, Gahan.

Trans. Ent. Soc. Lond., 1891. p. 373.

Capite nigro; antennis fuscis, articulo primo pallide brunneo, articulis 80 ad 10um fulvis; prothorace transverso, testaceo, nitido; scutello nigro; elytris dense punctulatis, flavis, sutura antice, vitta utrinque submarginali et macula parva utrinque pone medium, nigris; corpore subtus (post-pectore excepto) flavescente; pedibus totis fulvis.

Mas. Articulis antennarum 30 ad 5um incrassatis; femoribus intermediis subtus infra medium unituberculatis; tibiis intermediis subtus supra medium angulatis, deinde ad apicem dilatatis. Long. 6—7 mm.

Hab. Brazil; Rio Janeiro (J. Gray), Bahia.

Head black; front with a rather sharp median carina extending from the raised clypeal margin to between the insertion of the antennæ. Antennæ blackish brown, with the first joint light brown, or in some cases yellowish, with joints 8—10 fulvous. Prothorax transverse, testaceous, nitid. Elytra closely punctulate, yellowish, with the suture for a short distance behind the scutellum, a submarginal vitta on each side from the shoulder extending to about the beginning of the apical fifth, and a spot on each just inside and anterior to the posterior extremity of the vitta, black. Body underneath yellowish, hind breast black. Legs fulvous.

MALE. Antennæ with joints 3rd to 5th somewhat thickened. Femora of middle legs with a small tubercle on the ventral side a little below the middle of its length; tibiæ of the same dilated for nearly their distal two-thirds.

Var. A. In specimens from Bahia, which do not seem to differ in any other particular from typical examples from Rio Janeiro, the sixth to eighth joints of the antennæ, instead of the eighth to tenth, are pale fulvous.

Var. B. Elytra with an elongate-triangular spot on each shoulder, a common elongate sutural spot behind the scutellum, and two spots on each posteriorly, black.

Var. C. Differs from type in wanting the posterior spot on the disk of each elytron. This variety is represented in the B. M. collection by a single specimen from Santa Cruz, Brazil.

#### 84. Diabrotica dulcis, Gahan, n.n.

Diabrotica amæna, Baly MS., nec Dalm., nec Baly, Trans. Ent. Soc. Lond., 1890, p. 45.

Anguste ovata, postice paullo ampliata, convexa, fulva, nitida, tibiis, tarsis, pectore capiteque nigris; antennis piceo-nigris, basi

fulvo-piceis, articulis octavo nonoque albidis; thorace quam longo latiori, disco sulco arcuato, et ante sulcum fovea magna male definita impresso; elytris rude punctatis, viridi-metallicis, limbo externo, apice dilatato, fascia prope medium, lineaque suturali pone medium flavis.

Long. 6 mm.

Hab. Cayenne.

Head not broader than long, triangular; clypeus with a strongly raised longitudinal ridge, excavated on the sides, impunctate, the lateral angles piceous; antennæ slender, filiform, longer than the body, the second joint short, subovate, the third nearly twice its length, the fourth distinctly longer than the third; the four lower joints obscure piceo-fulvous, the eighth and ninth white. about one-fourth broader than long; sides rather broadly margined, sinuate and slightly diverging from the base to beyond the middle. thence slightly converging towards the apex, the anterior angles subacute, hinder ones acute; upper surface convex, flattened on the hinder disk, the latter with a broad, shallow, and ill-defined curved depression, immediately in front of which, on the anterior disk, is a shallow excavation; surface remotely punctured. Elytra oblong-ovate, dilated posteriorly, regularly rounded at the apices, convex, longitudinally depressed along the suture, coarsely punctured, very sparingly clothed with suberect hairs. [Baly.]

85. Diabrotica spectanda, Baly.

Journ. Linn. Soc., xix., p. 241.

Hab. Colombia.

# 86. Diabrotica fasciatipennis, sp. n.

Oblongo-ovata, postice paullo ampliata; capite nigro; antennis nigris articulis ultimis quatuor flavis; prothorace transverso, testaceo-flavo, nitido, disco leviter bifoveolato; elytris dense punctulatis, pallide flavis, basi late et fascia transversa pone medium nigris, corpore subtus, prothorace excepto, tibiis tarsisque et apicibus femorum nigris. Long,  $7\frac{1}{2}$  mm.

Var. Femoribus totis nigris.

Hab. Venezuela (Dyson), (type); Colombia, Cauca (var.).

Head black, the front with a median carina passing from the clypeal margin to between the insertion of the antennæ. Antennæ black, with the last four joints, the tip of the eleventh excepted, yellowish; with the third joint at least twice as long as the second,

with these two together slightly longer than the fourth. Prothorax transverse, nitid, testaceous yellow; the sides slightly and gradually diverging for about two-thirds of the way from the base, thence converging to the apex; the disk with two shallow foveolate depressions. Elytra thickly and finely punctured, with the punctures thicker and somewhat stronger towards the middle; pale yellow, with the basal fourth (somewhat broader along the suture) and a transverse band behind the middle, black. The under side of the body, the prothorax excepted, the tibiæ, and tarsi, black. Femora yellow, with the tips of the posterior and the upper side of the apical half of the four anterior femora black.

In the specimen from Colombia the legs, excepting the anterior coxæ, are entirely black.

87. Diabrotica insignita, Baly.

Journ. Linn. Soc., xix., p. 256.

Hab. Colombia.

88. Diabrotica Borrei, Baly.

Ent. Mo. Mag., xxv., p. 253.

Anguste oblongo-ovata, postice paullo ampliata, convexa, nigra, nitida, femoribus antennis apice thoraceque flavis, hoc quam longo fere duplo latiori, lævi, dorso bifoveolato; elytris subcrebre punctatis, limbo externo, apice dilatato, fascia lata prope medium suturaque postice flavis.

Long. 6-61 mm.

Hab. Brazil, Tejuca, Petropolis (Gray).

Head wedge-shaped, slightly longer than broad; clypeus clothed with adpressed sinuous hairs, transverse, its upper surface with a broad longitudinal ridge; antennæ filiform, nearly equal to the body in length, the second joint short, oblong, the third nearly twice its length, the fourth about one-third longer than the third; the four upper joints, the extreme apex of the eleventh, yellowish white. Thorax nearly twice as broad as long; sides straight and nearly parallel from the base to beyond the middle, thence obliquely converging towards the apex, the hinder angle slightly produced, acute; upper surface shining, nearly impunctate, middle disk with two large, shallow, ill-defined foveæ. Elytra broadly oblong, scarcely dilated posteriorly, obtusely rounded at the apex; convex, distinctly punctured. [Baly.]

D. cruciata, Baly (Ent. Mo. Mag., xxv., p. 253) is merely a variety of this species.

# 89. Diabrotica perspicua, Baly.

P. Z. S., 1889, p. 94.

Oblongo-ovata, postice paullo ampliata, convexa, flavo-fulva, nitida, antennis nigris, basi piceis, articulis apicalibus tribus, fultimi apice excepto, fulvis; thorace transverso, disco late transversim impresso, sulco utrinque dilatato et magis fortiter impresso; elytris crebre punctatis, nigris, limbo externo fasciaque prope medium flavo-fulvis.

Var. A. Elytrorum fascia centrali ad suturam abbreviata. Long.  $5\frac{1}{2}$  mm.

Hab. Amazons, Ega (Bates).

Antennæ slender, filiform, rather longer than the body, the second joint short, cylindrical, the third nearly twice its length, the fourth slightly longer than the third; the four lower joints piceous or piceo-fulvous, the three upper ones, the apex of the eleventh excepted, fulvous, the rest black. Thorax nearly twice as broad as long; sides nearly straight and parallel from the base to the middle, thence rounded and converging towards the apex; disk impressed with a broad transverse sulcation, which is dilated on either side into a large shallow fovea. Elytra broadly oblong, slightly dilated posteriorly, regularly rounded at the apex, convex, transversely depressed below the basilar space, closely and finely but distinctly punctured, outer disk below the humeral callus longitudinally grooved. [Baly.]

# 90. Diabrotica alcyone, Baly.

# P. Z. S., 1889, p. 94.

Late ovata, modice convexa, fulva, nitida, pedibus (femoribus apice exceptis) antennisque piceo-nigris, his extrorsum piceis; thorace transverso, minute subremote punctato, disco bifoveolato; elytris tenuiter sed distincte punctatis, nigris, limbo externo fasciaque prope medium fulvis.

Var. A. Elytrorum fascia discoidali obsoleta.

Long. 6 mm.

Hab. Amazons (Bates).

Head triangular; elypeus broader than long, slightly swollen on the disk; antennæ slender, filiform, the second joint short, oblong, the third nearly twice its length, the fourth rather longer than the third; the four or five lower joints nigro-piceous, the rest pale piceous. Thorax nearly twice as broad as long; sides rather broadly margined, parallel and sinuate from the base to the middle, thence obliquely rounded and converging towards the apex, the anterior angles obtuse, the hinder ones acute; upper surface minutely and remotely punctured, disk impressed with two large shallow fovee. Elytra broadly ovate, rather broadly margined, regularly rounded at the apex; upper surface moderately convex, slightly depressed below the humeral callus, the latter obsoletely thickened; surface distinctly but not very closely punctured. Baly.]

# 91. Diabrotica diversa, Gahan, n. n.

Diabrotica impressipennis, Baly MS.; nec Jac., Biol. C. A., Col., vi., p. 530.

Late ovata, modice conveva, fulvo-flava, nitida, antennis nigris, articulis apicalibus tribus, ultimo apice excepto, albidis, tibiis tarsisque piceo-tinctis; thorace transverso; utrinque vix pone medium obsolete foveolato; elytris tenuiter sed distincte punctatis, utrisque infra medium transversim impressis; nigris, apice flavis.

Long. 3 lin.

Hab. Amazons (Bates), Ecuador (Buckley).

Head triangular; clypeus scarcely broader than long, its surface transversely convex; antennæ slender, filiform, the second joint short, cylindrical, the third nearly twice its length, the fourth rather longer than the third; the basal joint more or less piceous on its lower half, the three upper ones, the apex of the eleventh excepted, yellowish white. Thorax nearly twice as broad as long at the base; sides rather broadly margined, slightly converging and slightly sinuate from the base to the middle, thence more quickly converging towards the apex, the anterior angles slightly produced, subacute; disk transversely convex, very remotely punctured, hinder disk impressed on either side with a large, shallow, ill-defined fovea. Elytra broadly subquadrate-ovate, slightly dilated posteriorly, their apices obtusely rounded; above moderately convex, transversely depressed below the basilar space, the latter slightly thickened; finely but not very closely punctured; on the outer disk of each elytron below the middle is a short, broad, but ill-defined transverse sulcation; running downwards from the humeral callus to this groove are two faintly raised longitudinal vittæ. [Baly.]

# 92. Diabrotica simulans, Baly.

P. Z. S., 1889, p. 93, nec Journ. Linn. Soc., xix. p. 222. Late ovata, postice vix ampliata, modice convexa, dorso subdepressa, nigra, nitida, thorace capiteque fulvis, antennis nigris TRANS. ENT. SOC. LOND. 1891.—PART III. (OCT.) 2 H extrorsum albídis; thorace transverso, sat profunde bifoveolato, foveis inter se connexis; elytris tenuiter subcrebe punctatis, infra basin non excavatis, limbo externo late fulvo.

Long.  $5\frac{1}{2}$  mm.

Hab. Amazons, Ega (Bates).

Antennæ slender, filiform, the second joint short, obconic, the third nearly twice its length, the fourth rather longer than the third; the five lower joints black, the six upper ones white. Thorax nearly twice as broad as long; sides sinuate and slightly diverging from the base to beyond the middle, thence rounded and converging towards the apex; upper surface obliquely deflexed on the sides, the latter rather broadly margined; disk with two large foveæ, which are connected with each other by a shallow depression. Elytra broadly oblong-ovate, scarcely dilated posteriorly, regularly rounded at their apices, moderately convex, slightly flattened on the suture, not excavated below the basilar space, minutely punctured; the outer limb broadly fulyous. [Baly.]

# 93. Diabrotica albomarginata, Baly.

P. Z. S., 1889, p. 92.

Late oblongo-ovata, postice ampliata, modice convexa, dorso subdepressa, nigra, nitida, antennarum articulis tertio ad nonum pallide flavo-fulvis (duo apicales fracti sunt); thorace fortiter arcuatim impresso, sulco utrinque magis excavato; elytris tenuiter punctatis, margine laterali late albido.

Long.  $5\frac{1}{2}$  mm.

Hab. Ecuador (Buckley); a single specimen.

Head not longer than broad, trigonate; clypeus convex, its upper two-thirds with a faint longitudinal ridge; antennæ robust, filiform, pubescent, the second joint short, cylindrical, increasing in thickness towards the apex, the third nearly twice its length, the fourth nearly as long as the preceding two united; the two lower joints black, the third to the ninth pale flavo-fulvous (the two upper ones broken off). Thorax more than one-third broader than long; sides broadly margined, straight and parallel from the base to the middle, thence obliquely converging to the apex, the anterior angles obtuse, the hinder ones subacute; upper surface finely but not closely punctured; disk impressed with a large, shallow, ill-defined, curved sulcation, either end of which is more deeply foveolate. Elytra ovate, their lateral limb broadly dilated, their apices conjointly regularly rounded; moderately convex, slightly flattened along the suture, minutely and subremotely punctured. [Baly.]

# 94. Diabrotica albocineta, Baly.

# P. Z. S., 1889, p. 93.

Anguste ovata, postice ampliata, convexa, nigra, nitida, thorace lateribus lati, elytrorum limbo externo apice dilatato, fasciaque angusta vix pone medium, albidis; thorace bifoveolato.

Long.  $5\frac{1}{2}$  mm.

Hab. Peru.

Antennæ filiform, the second joint short, moniliform, the third more than twice as long, equal in length to the fourth; eight lower joints black (the rest in the only specimen before me are broken off). Thorax rather more than one-half broader than long; sides nearly straight and parallel from the base to beyond the middle, thence slightly narrowed obliquely to the apex; disk transversely convex, impressed on either side with a deep round fovea. Elytra oblong, dilated posteriorly, regularly rounded at the apex, convex, slightly flattened on the suture below the basilar space, finely punctured. [Baly.]

# 95. Diabrotica albopicta, Baly.

### P. Z. S., 1889, p. 93.

Anguste ovata, postice ampliata, convexa, flavo-fulva, nitida; tibiis, tarsis, pectore, scutello capiteque nigris; antennis basi piceo-fulvis, articulis penultimis duobus albidis; thorace quam longo plus dimidio latiori, disco leviter trifoveolato; elytris subrugulosis, rude punctatis; nigris, utrisque macula infra basin, altera ante apicem fasciaque prope medium, utrinque abbreviata, albidis.

Long.  $5\frac{1}{2}$  mm.

Hab. Peru; a single specimen.

Head not longer than broad, triangular; clypeus with a strongly raised longitudinal ridge, which extends as far as the anterior margin, the latter thickened, space on either side concave, closely covered with fine punctures; antennæ filiform, the second joint short, oblong, the third and fourth equal in length, each twice as long as the second; the five lower joints piceo-fulvous, the antepenultimate and penultimate white, the rest black. Thorax more than one-half broader than long; sides broadly margined, straight and parallel from the base to the middle, thence obliquely rounded and converging towards the apex; upper surface moderately convex, impressed with three shallow ill-defined foveæ, one small and oblong-ovate, placed a short distance in front of the basal, and two,

one on either side the central disk, larger and subrotundate. Elytra ovate, dilated posteriorly, regularly rounded at the apex, convex, not excavated below the basilar space, coarsely and irregularly punctured, their interspaces irregularly rugulose; surface on the sides and towards the apex sparingly clothed with fine suberect hairs, visible only under a lens. [Baly.]

# 96. Diabrotica zonula, Baly.

# P. Z. S., 1889, p. 92.

Sat late ovata, postice ampliata, modice convexa, nigra, nitida, antennis extrorsum albidis, thorace flavo-fulvo, obsolete bifoveo-lato; elytris distinct minus crebre punctatis, limbo externo, apice paullo ampliato, fasciaque prope medium flavo-fulvis.

Long.  $6\frac{1}{2}$  mm.

# Hab. Ecuador (Buckley).

Head scarcely longer than broad, triangular; clypeus convex, the longitudinal ridge obsolete; antennæ slender, filiform, the second joint short, oval, the third twice its length, the fourth slightly but distinctly longer than the third; the four upper joints yellowish white, the rest black. Thorax nearly twice as broad as long; sides nearly parallel and slightly sinuate from the base to just beyond the middle, thence slightly converging obliquely towards the apex, anterior angles obtuse, the hinder ones slightly produced, subacute; disk transversely convex, the middle disk faintly impressed on either side with a large, very shallow, fovea, Elytra rather strongly dilated posteriorly, moderately convex. faintly excavated on the suture, rather strongly but not closely punctured. [Baly.]

# 97. Diabrotica unifasciata, Baly.

# P.Z.S., 1889, p. 92.

Late ovata, postice ampliata, modice convexa, dorso subdeplanata, nigra, nitida, thorace obsolete bifoveolato, albido; elytris tenuiter remote punctatis, limbo externo apice distincte ampliato, fasciaque prope medium albidis.

Long.  $6\frac{1}{2}$  mm.

# Hab. Peru, Chanchamayo.

Head not longer than broad, triangular; clypeus slightly excavated on either side, its medial with an elevated ridge; antennæ filiform, the second joint short, ovate, the third twice the length of the second, the third and fourth nearly equal. Thorax twice as broad as long; sides rather broadly margined, straight and parallel

from the base to just beyond the middle, thence very slightly converging towards the apex; disk transversely convex, slightly flattened on the middle, impressed on either side with a large, very shallow, ill-defined fovea, the anterior and hinder angles slightly produced, the former obtuse, the latter subacute. Elytra dilated posteriorly, broadly rounded at the apices, rather broadly margined, moderately convex, flattened along the suture, transversely excavated below the basilar space, very finely and distantly punctured. [Baly.]

# 98. Diabrotica discrepans, Baly.

P. Z. S., 1889, p. 94.

Oblongo-ovata, postice paullo ampliata, convexa, nigra, nitida, thorace capiteque sordide rufis, pedibus antennisque flavis, his apice piceis; thorace quam longo plus dimidio latiori, minute sed distincte punctato, disco sulco semilunato, medio ramulo fere ad basin emittente, impresso; elytris subcrebre punctatis, limbo externo ante medium limbo apicali, fasciaque prope medium flavis,

Fem. Clypeo quam longo latiori, medio sat fortiter elevatovittato.

Long. 23 lin.

Hab. Ecuador (Buckley).

Clypeus broader than long in the ? (the only sex known to me), divided in the medial line; which extends downwards nearly to the apical margin; antennæ filiform, the second joint short, oblong, the third nearly twice its length, the fourth slightly longer; flavous, the apical joint stained with piceous. Thorax more than one-half broader than long; sides rather broadly margined, nearly straight and parallel from the base to just beyond the middle, thence converging towards the apex; upper surface finely punctured, disk impressed with a curved broad but ill-defined sulcation, its concavity looking forwards; from its middle a short longitudinal space runs backwards nearly to the basal margin. Elytra subquadrate-ovate, dilated posteriorly, convex, rather closely punctured; the anterior half of the outer limb, the apical margin, and a transverse band across the middle, pale flavous. [Baly.]

99. Diabrotica mimula, Harold.

Coleopt., Hefte xiii., p. 92.

Hab. Colombia.

100. Diabrotica beata, Baly.

Journ. Linn. Soc., xix., p. 244.

Hab. Colombia.

# 101. Diabrotica subsimilis, Baly, sp. n.

Ovata, postice ampliata, sat valde convexa, nigra, nitida, capite thoraceque rufis, antennis pedibusque flavis; thorace tenuiter punctato, utrinque foveolato, foveis inter se convexis; elytris postice ampliatis apice obtuse truncatis; convexis, postice subventricosis, subfortiter punctatis, obsolete elevato-vittatis; fascia mediali ad marginem abbreviata apiceque flavis.

FŒM. Clypeo convexo, basi obsolete costato.
[Mas. Facie profunde transversim excavata.]
Long. 6—7 mm.

Hab. Colombia, Cauca.

Head distinctly longer than broad, subtrigonate; clypeus in the ? convex, its extreme base indistinctly elevate-vittate; antennæ slender, filiform, four-fifths the length of the body, the second joint filiform, slightly thickened towards its apex, nearly equal in length to the third, the fourth nearly as long as the preceding two united. Thorax nearly one-half broader than long at the base; sides sinuate behind the middle, rounded and converging towards the apex anteriorly, the hinder angles rather strongly produced, subacute; above convex, distinctly but rather distantly punctured, disk impressed on either side with a deep fovea, the foveæ connected by a transverse sulcation. Elytra broadly ovate, strongly dilated posteriorly, the apices conjointly obtusely rounded; above convex, more strongly so below the middle, transversely impressed at the suture below the basilar space, rather strongly but not very closely punctured; disk of each elytron with several ill-defined longitudinal ridges, the spaces between which are obsoletely sulcate.

Although this species differs in the relative length of the second and third joints of the antennæ, it agrees so closely in general form, coloration, and other characters, with the insects of the present section, that I have placed it amongst them. [Baly.]

102. Diabrotica bella, Baly.

L.c., p. 247.

Hab. Colombia, Magdalena River.

103. Diabrotica excelsa, Baly.

Ent. Mo. Mag., xxv., p. 254.

Ovata, postice ampliata, sat valde convexa, nigra, nitida, capite thoraceque rufo-fulvis aut fulvo-piceis; pedibus antennisque flavis, his apice tarsisque piceis; thorace lævi sat profunde bifoveolato; elytris distincte punctatis, obsolete elevato-vittatis; fascia mediali ad marginem abbreviata apiceque flavis.

Mas. Facie inferiori profunde excavata, antennis simplicibus.

FEM. Clypeo convexo, basi obsolete costato.

Long.  $9\frac{1}{2}$  mm.

Hab. Colombia, Cauca (Standinger).

Head longer than broad, somewhat wedge-shaped; clypeus in the & entirely covered with a deep, smooth, concave excavation; the same segment in the 2 convex, its extreme base with an indistinct longitudinal ridge; antennæ simple in both sexes, fourfifths the length of the body, filiform, the second joint short, the third and fourth equal in length, each more than twice as long as the second, the fourth cylindrical, not curved, the three or four outer joints more or less stained with piceous; apices of the joints black. Thorax about one-third broader than long; sides rounded, sinuate behind the middle, converging anteriorly towards the apex, the hinder angles produced, subacute; above convex, smooth, impunctate; disk impressed on either side with a deep fovea. Elytra broadly ovate, strongly dilated towards the apex, their apices conjointly obtusely rounded; above convex, subventricose behind the middle, transversely depressed below the basilar space, rather strongly but not very closely punctured, the puncturing at the base subscriate; on the disk of each elytron are several obsoletely raised longitudinal lines.

The above insect, of which I only know a single male and female, may be known from its congeners by its larger size, and more strongly punctured elytra. From D. subsimilis, with which species it agrees in the punctuation of its elytra, it differs in the relative length of the third and fourth joints of the antenne. [Baly.]

104. Diabrotica Gestroi, Baly.

Ent. Mo. Mag., xxv., p. 253.

Ovata, postice ampliata, valde convexa, nigra, nitida; thorace capiteque rufo-fulvis, pedibus antennisque flavis, thorace minute

punctato, utrinque foveolato; elytris late oblongo-ovatis, postice ampliatis, apice subtruncatis, sat valde convexus, tenuiter sed distincte subcrebre punctatis, fascia communi prope medium, ad marginem abbreviata, margineque apicali flavis.

Mas. Facie inferiori profunde excavato, concavo, antennis simplicibus.

FEM. Clypeo convexo, punctis majoribus nonnullis impressis, basi longitudinaliter carinato.

Long.  $5\frac{1}{2}$ —7 mm.

Hab. Eastern Peru, Ecuador.

Antennæ slender and filiform in both sexes, the second joint short, oblong, the third twice its length, rather longer in the \$\mathcal{\beta}\$, the third and fourth joints nearly equal; flavous, the four upper joints slightly stained with piceous. Thorax about one-fourth broader than long at the base; sides slightly converging and slightly sinuate from the base to the middle, thence more quickly converging towards the apex; upper surface moderately convex, minutely but not closely punctured, the punctures only visible under a lens; disk impressed on either side with a deep fovea. Elytra broadly oblong, dilated posteriorly, their apices very obtusely rounded, conjointly subtruncate; above rather strongly convex, slightly depressed on the suture below, the basilar space finely but distinctly punctured. [Baly.]

105. Diabrotica Stevensi, Baly.

Journ. Linn. Soc., xix., p. 248.

Cerotoma Deyroleii, Baly, Trans. Ent. Soc. Lond., 1866, p. 477.

Hab. Colombia, Magdalena River; Venezuela, Bogota.

106. Diabrotica imitans, Jacoby.

P. Z. S., 1879, p. 791.

Hab. Venezuela.

107. Diabrotica Jekelii, Baly.

Journ. Linn. Soc., xix., p. 246.

Hab. Colombia.

108. Diabrotica fenestrata, Baly. Journ. Linn. Soc., 1886, p. 250. Hab. Venezuela, Merida.

109. Diabrotica caviceps, Baly.

Ent. Mo. Mag., xxv., p. 253.

Oblonga-ovata, postice ampliata, convexa, nigra, nitida, pedibus capiteque flavis, antennis extrorsum piceo-tinctis; thorace rufotestaceo, minute subremote punctato, utrinque foveolato; scutello piceo aut piceo-nigro; elytris convexis, distincte subcrebre punctatis, basi, limbo externo apice paullo dilatato, fasciaque communi prope medium flavis.

Mas. Clypeo profunde excavato, convexo; antennis simplicibus, filiformibus.

Fem. Clypeo convexo, basi longitudinaliter elevato-vittato, punctis majoribus sparse impresso.

Var. A. Thorace scutelloque flavis, elytrorum plaga basali obsoleta.

Var. B. Elytrorum fascia mediali ad marginem abbreviata. Long. 5—6 mm.

Hab. Amazons, Para, Santarem (Bates).

Lower face deeply excavated and concave in the  $\mathcal{J}$ , transversely convex in the  $\mathfrak{I}$ , its upper portion with a slightly raised longitudinal ridge, the surface sparingly impressed with large punctures; antennæ filiform in both sexes, the second joint short, oblong-ovate, the third more than twice its length, the third and fourth equal, the latter very slightly curved in the  $\mathfrak{J}$ . Thorax about one-fourth broader than long; sides nearly straight and parallel from the base to beyond the middle, thence obliquely converging towards the apex; above convex, very minutely punctured, disk impressed on either side with a subrotundate fovea. Elytra subquadrate-ovate, dilated posteriorly, their apices obtusely rounded; above convex, distinctly but finely punctured. [Baly.]

# 110. Diabrotica conchula, Erichs.

Wiegm. Archiv., 1847, i., p. 168.

Ovata, postice ampliata, sat valde convexa, flava, nitida, corpore subtus, pedibus exceptis, nigris, capite thoraceque plus minusve rufo-tinctis aut totis rufis, scutello piceo; thorace lævi, bifoveolato; elytris tenuiter punctatis, utrisque fasciis duabus latis una infra basin altera pone medium nigris.

Mas. Facie inferiori profunde excavata, antennarum articulo quarto leviter curvato.

FEM. Clypeo convexo, basi longitudinaliter costato; antennis filiformibus.

Long. 6-7 mm.

Hab. Peru, Chanchomayo; Bolivia, Amazons (Bates).

Head rather longer than broad, subtrigonate; clypeus in the & entirely occupied by a large concave fovea, convex in the 2, its upper half with a distinct longitudinal ridge; antennæ slender, filiform, the third and fourth joints equal, each twice the length of the second, the fourth in the & slightly curved. Thorax nearly one-half broader than long; sides nearly straight and parallel behind the middle, thence rounded and converging towards the apex, the hinder angles acute; above convex, smooth, impunctate; disk impressed on either side with an oblique fovea. Elytra broadly ovate, dilated posteriorly, their apices conjointly obtusely rounded; upper surface strongly convex, faintly excavated transversely below the basilar space, finely punctured; each elytron with two transverse bands abbreviated on the outer margin, less distinctly so on the suture; the first extends from below the base nearly to the middle, the second from the middle nearly to the apex; the elytra may be described as black, with the base, more or less broadly, a narrow sutural line, the outer limb, and a medial fascia, flavous. [Baly.]

111. Diabrotica jucunda, Baly.

Journ. Linn. Soc., xix., p. 247. Hab. Colombia.

112. Diabrotica læta, Fabr.

Syst. Ent., i., p. 454; Baly, l. c., p. 258.

113. Diabrotica tarsata, Gahan, n. n.

Diabrotica tarsalis, Baly, Ent. Mo. Mag., xxv., p. 254, nee Harold.

Oblongo-ovata, postice ampliata, convexa, pallide flava, nitida; pectore, abdomine, antennis apice scutelloque nigris, mandibulis apice, coxisque piceis; thorace minute punctato, dorso leviter biimpresso; elytris distincte sat crebre punctatis; nigris, limbo externo, apice paullo dilatato, fasciaque communi prope medium pallide flavis.

Mas. Tibiis anticis a basi ad apicem incrassatis, tarsorum anticorum articulo basali ampliato, transverso-quadrato.

Long. 5 mm.

Hab. Bahia; a single specimen.

Head longer than broad; clypeus in the 3 large, subquadrate, its disk smooth, concave; antennæ slender, filiform, the second joint short, oblong, the third more than twice its length, nearly as long as the fourth, pale flavous, the five outer joints black, the two basal ones stained above with piceous. Thorax broader than long; sides straight and nearly parallel from the base to beyond the middle, thence obliquely converging towards the apex; upper surface very finely punctured, the punctures only visible under a lens, middle disk with two obliquely placed oblong foveæ. Elytra broadly oblong, dilated posteriorly, obtusely rounded at the apex; above convex, slightly excavated on the suture below the basilar space, distinctly and rather closely punctured. [Baly.]

### 114. Diabrotica quadriplagiata, Boh.

Eugen. Res., p. 179.

Oblongo-ovata, postice ampliata, convexa, flava, nitida, pectore scutello, antennisque extrorsum nigris, his basi apiceque piceis, abdomine piceo-tincto; thorace quam longo latiori, minute punctato, utrinque foveolato; elytris sat crebre punctatis, fulvis, utrisque plaga magna subquadrata a basi ad medium extensa, interdum disco fulvo-notata, alteraque pone medium, subrotundata, nigris.

Var. A. Elytrorum plaga antica nigra intus profunde emarginata.

Long. 5—6 mm.

Hab. Brazil, Rio Janeiro, Bahia.

Head triangular; clypeus in the 2 (the only sex known to me) not longer than broad, slightly convex, its basal portion with a slightly raised longitudinal ridge; antennæ filiform, the second joint short, oblong, the third more than twice its length, as long as the fourth; the two lower joints piceous, the six upper ones, the basal half of the first of these excepted, black. Thorax nearly one-fourth broader than long; sides nearly straight and parallel from the base to the middle, thence rounded and converging towards the apex; upper surface finely punctured, disk impressed with two oblong foveæ, placed obliquely on either side. Elytra broadly oblong-ovate, dilated posteriorly, their apices obtusely rounded; above convex, slightly depressed on the suture below the basilar space, rather strongly punctured. [Baly.]

115. Diabrotica elypeata, Baly.

Journ. Linn. Soc., xix., p. 249.

Hab. Colombia.

116. Diabrotica deliciosa, Baly.

Journ. Linn. Soc., xix., p. 251.

Hab. Colombia; a single specimen.

117. Diabrotica xanthoptera, Baly.

Journ. Linn. Soc., 1886, p. 250.

Hab. Colombia, Magdalena River.

118. Diabrotica sordidipennis, Baly.

Ent. Mo. Mag., xxv., p. 253.

Anguste-ovata, postice ampliata, convexa, nigra, nitida; capite thoraceque piceis; antennis basi, pedibus elytrisque sordide flavis; thorace sat profunde bifoveolato; elytris sat fortiter subcrebre punctatis.

Mas. Antennis filiformibus; clypeo profunde excavato.

Long.  $8\frac{1}{2}$  mm.

Hab. Colombia, Cauca; a single specimen.

Head longer than broad, wedge-shaped, its surface in the 3 (the only sex known to me) entirely occupied by a deep, concave, smooth excavation; antennæ nearly four-fifths the length of the body, filiform, the second joint short, obovate, the third more than twice its length, nearly equal to the fourth, the latter simple, not curved. Thorax about one-third broader than long; sides rounded, nearly straight and obliquely diverging from the base to the middle, the hinder angles produced, subacute; above convex, finely punctured, disk impressed on either side with a large deep fovea. Elytra ovate, dilated posteriorly, their apices conjointly obtusely rounded, strongly convex, rather coarsely punctured.

Closely allied to *D. xanthoptera*; separated by its larger size, and by the more strongly punctured elytra. [Baly.]

119. Diabrotica reticulata, Baly.

Ent. Mo. Mag., xxv., p. 254.

"Late ovata, ventricosa, picea, femoribus fulvis; thorace lateribus angulatis, disco lavi, profunde bifoveolato; elytris basin trans-

versim depressis, foveolato punctatis, interspatiis incrassatis, rete elevatum formantibus." Long. 10 mm.

Hab. Colombia, Cauca.

This species may be easily recognised by the large foveolate punctures of the elytra, with the interspaces raised, and forming a coarse reticulated corrugation.

# 120. Diabrotica corrugata, Baly.

Ent. Mo. Mag., xxv., p. 254.

Ovata, postice ampliata, convexa, nitida, subtus nigra, pedibus flavis, tarsis duobus ultimis piceis; supra pallide fulvo-picea, antennis extrorsum labroque piceis, oculis scutelloque nigris; thorace fere impunctato, disco arcuatim sulcato, sulco trifoveolato; elytris infra basin transversim depressis, tenuiter punctatis, disco laxe et irregulariter elevato-corrugatis.

Long.  $9\frac{1}{2}$  mm.

Hab. Colombia, Cauca; a single specimen.

Head longer than broad, broadly wedge-shaped; antennæ filiform, nearly as long as the body, the relative length of the joints as in *D. tortua*, the four outer ones piceous. Thorax one-third broader than long; sides parallel, slightly produced and rounded before the middle, slightly sinuate posteriorly, the hinder angles acute, the anterior ones armed with an obtuse flattened tubercle; upper surface convex, minutely punctured on the sides, medial disk nearly impunctate; hinder disk with a transverse curved sulcation, the surface of which is distinctly trifoveolate. Elytra similar in form and sculpture to *D. tortua*.

This species is very closely allied to the following one, but may be separated by the different coloration of the upper surface of the body and antennæ, and by the transversely sulcate thorax. [Baly.]

# 121. Diabrotica tortua, Baly.

Diabrotica torta, Ent. Mo. Mag., xxv., p. 254.

Ovata, postice ampliata, convexa, nigra, nitida, femoribus flavis, antennis extrorsum, elytrisque apice sordide fulvis; thorace trifoveolato, minute punctato; elytris infra basin transversim excavatis, sat crebre punctatis, disco irregulariter corrugatis.

Long.  $9\frac{1}{2}$  mm.

Hab. Colombia, Cauca.

Head longer than broad, wedge-shaped; clypeus with a strongly raised longitudinal ridge, the surface on either side finely rugulose, rather shorter than the body, filiform, the second joint half the length of the basal one, the third twice as long as the second, the rest each nearly equal in length to the fourth, the four outer joints obscure fulvous, the apical darker than the three others. Thorax one-third broader than long; sides parallel, very slightly produced before the middle, subsinuate behind the latter; the hinder angles, the anterior ones with an obtuse tubercle: disk convex, finely but remotely punctured, impressed with three round foveæ, placed one on either side, and the third, rather smaller, on the medial line near the base. Elytra oblong-ovate, dilated posteriorly, their apices conjointly regularly rounded; above convex, subventricose posteriorly, transversely excavated below the basilar space, distinctly and somewhat closely punctured; disk below the base with a number of rather strongly raised irregular wrinkles, which disappear towards the apex of the elytron. [Balv.]

122. Diabrotica rugulosa, Baly.

Trans. Ent. Soc. Lond., 1886, p. 450.

Hab. Eastern Ecuador.

# 123. Diabrotica assimilis, Gahan, sp. n.

Atro-cyanea, femoribus antennisque flavescentibus, his apice infuscatis; prothoracis dorso bifoveolato, subsparsim minuteque punctato; elytris crebre fortiterque rugoso-punctatis, cyaneis (vel olivaceo-tinctis), epipleuris antice et macula marginali utrinque ante medium sordide flavis. Long.  $7\frac{1}{2}-8\frac{1}{2}$  mm.

### Hab. Ecuador (Buckley).

This species closely resembles *D. rugulosa*, Baly, but differs from it by the following characters:— Prothorax less strongly punctured, the foveæ of its disk joined by means of a feeble transverse depression. Elytra without raised longitudinal lines on the disk, with their epipleures rather broader and flatter, yellowish in their anterior two-thirds; with a yellowish spot just before the middle of the lateral margin of each elytron. Femora and antennæ yellowish rather than greenish; the third joint of the latter shorter than the fourth, and nearly twice as long as the second. Hind breast without a patch of golden pubescence on each side.

# 124. Diabrotica marginicollis, Gahan, sp. n.

Capite prothoracisque dorso (hoc margine laterali excepto) atrocyaneis; prothorace dense distincteque punctato, utrinque leviter foveolato; scutello nigro; elytris fortiter rugoso-punctatis, purpureo-rufescentibus; corpore subtus (prothorace flavo excepto) tibiis tarsisque nigris; femoribus antennisque flavescentibus. Long. 8 mm.

#### Hab Colombia.

Head blue-black; front carinate along the middle, punctured at each side below the insertion of the antennæ; vertex with a median fovea between the eyes. Prothorax transverse; sides nearly parallel; disk thickly and distinctly punctured, with a fovea on each side, and a short feeble median longitudinal impression close to the base, its colour dark blue, with the narrow reflexed lateral borders yellowish, like the under side. Scutellum black, nitid, impunctate. Elytra closely, strongly, and somewhat rugosely punctured; dark red with a purplish tint.

This species has at first sight a strong resemblance to D. chrysopleura, Harold (Sect. I.). The coloration of the elytra is almost exactly the same in both species. Harold has described this colour as obscure purple, but Baly (Trans. Ent. Soc. Lond., 1890, p. 85) thought it better described as "rufous, more or less stained with piceous."

# 125. Diabrotica hebe, Baly.

Trans. Ent. Soc. Lond., 1865, p. 348; Journ. Linn. Soc., xix., p. 241.

Hab. Colombia.

126. Diabrotica gibbosa, Baly.

Trans. Ent. Soc. Lond., 1886, p. 450.

Hab. Ecuador.

127. Diabrotica opacipennis, Baly.

Ann. and Mag. Nat. Hist., 5th ser., iii., p. 182.

Hab. Ecuador.

# 128. Diabrotica erythroptera, Baly.

P. Z. S., 1889, p. 95.

Ovata, postice ampliata, convexa, nigra, nitida, elytris rubris; thorace arcuatim sulcato, sulco trifoveolato; elytris crebre punctatis.

Long.  $7\frac{1}{2}$  mm.

Hab. Peru, Chanchomayo (Thamm).

Head triangular, slightly longer than broad; clypeus with a longitudinal ridge; antennæ equal to the body in length, filiform, the second joint short, subovate, the third more than twice its length, slightly shorter than the fourth. Thorax rather more than one-half broader than long; sides rather broadly margined, nearly straight and slightly diverging from the base to beyond the middle, thence rounded and converging towards the apex; upper surface shining, nearly impunctate, hinder disk with a deep curved sulcation, the surface of which is trifoveolate. Elytra broadly ovate, dilated posteriorly, regularly rounded conjointly at the apex; convex, faintly depressed below the basilar space, rather strongly punctured. [Baly.]

# 129. Diabrotica sanguineipennis, Baly, sp. n.

Ovata, postice ampliata, convexa, nigra, nitida, elytris rubris; thorace trifoveolato; elytris subcrebre punctatis.

Long.  $7\frac{1}{2}$  mm.

Hab. Peru, Chanchomayo (Thamm).

Head triangular, distinctly longer than broad; clypeus with a longitudinal ridge; vertex with a very large deeply impressed fovea; antennæ with the second joint short, obovate (the rest in the single specimen before me broken off). Thorax nearly twice as broad as long across the middle; sides rather broadly margined, slightly rounded and diverging from the base to beyond the middle, thence rounded and converging towards the apex; apical angle produced, slightly thickened, subacute, the hinder ones acute; above convex, subremotely punctured; disk just behind the middle impressed on either side with a large rounded fovea; between the two, just in front of the basal margin, is another, shallow and ill-defined. Elytra oblong-ovate, dilated posteriorly, regularly rounded conjointly at the apex; above convex, subventricose, not excavated below the basilar space, rather strongly punctured, the puncturing rather more crowded than in *D. rubripennis*, Erichs. [Baly.]

130. Diabrotica rubripennis, Erichs.

Wiegm., Archiv., 1847, i., p. 168.

Ovata, postice ampliata, convexa, nigra, nitida, elytris rubris thorace bifoveolato; elytris subcrebre punctatis.

Long.  $5\frac{1}{2}$ — $6\frac{1}{2}$  mm.

Hab. Peru, Chanchomayo (Thamm).

Head triangular, scarcely longer than broad; clypeus with a strongly elevated ridge; antennæ nearly equal to the body in length, filiform, the second joint short, oblong, the third twice its length, equal to the fourth. Thorax nearly twice as broad as long; sides slightly rounded and diverging from the base to beyond the middle, thence rounded and converging towards the apex, the anterior angles slightly produced, subacute, the hinder angles acute; disk impressed on either side with two large deep foveæ, separated from each other by a narrow space. Elytra gradually dilated posteriorly, rounded conjointly at their apices; convex, not excavated below the basilar space, distinctly but not coarsely punctured. [Baly.]

131. Diabrotica butleri, Baly.

Journ. Linn. Soc., xix., p. 251.

Hab. Colombia.

132. Diabrotica dimidiatipennis, Baly.

Trans. Ent. Soc. Lond., 3rd ser., vol. ii., p. 350. Hab. Peru.

133. Diabrotica intermedia, Baly.

Journ. Linn. Soc., xix., p. 252.

Hab. Colombia.

134. Diabrotica saundersi, Baly.

Trans. Ent. Soc. Lond., 3rd ser., vol. ii., p. 350.

Hab. Ecuador, Quito.

135. Diabrotica dimidiata, Baly.

Ann. and Mag. Nat. Hist., 3rd ser., iv., p. 270.

Hab. Ecuador.

TRANS, ENT. SOC. LOND, 1891.—PART III. (OCT.) 2 I

136. Diabrotica divisa, Baly.

Ann. and Mag. Nat. Hist., 5th ser., iii., p. 83 Hab. Ecuador.

137. Diabrotica posticata, Baly.

Journ. Linn. Soc., xix., p. 252.

Hab. Colombia.

138. Diabrotica quadripunctata, Gahan, sp. n.

Cerotoma quadripunctata, Buq. MS.

Late ovata, flavescens; elytris atro-cyaneis, tertia basali (punctis quatuor atro-cyaneis exceptis) marginibusque externis flavis; corpore subtus (abdomine nigro excepto), pedibus antennisque flavescentibus; prothoracis dorso bi-impresso, impunctato, nitido; elytris subventricosis sat dense punctulatis. Long. 6 mm.

Hab. Colombia.

Testaceous yellow. Antennæ with the third joint twice as long as the second, and equal in length to the fourth. Prothorax with its sides almost parallel, its disk impunctate, nitid, with two transverse impressions. Elytra bluish black, with the basal third (four blue-black points, of which one is over each shoulder, and one on the disk of each elytron a little behind the base, excepted), and the entire outer margin yellowish. Abdomen black.

139. Diabrotica lugubris, Baly.

Journ. Linn. Soc., xix., p. 253.

Hab. Colombia.

140. Diabrotica dimidiaticornis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 451.

Hab. Ecuador.

141. Diabrotica leucospila, Baly.

Journ. Linn. Soc., xix., p. 253.

Hab. Colombia.

142. Diabrotica socia, Gahan, n. n.

Diabrotica tetraspilota, Baly, Journ. Linn. Soc., xix., p. 254, nec Baly, Trans. Ent. Soc., Lond., 1865, p. 351.

Hab. Colombia.

143. Diabrotica tuberculata, Balv.

P. Z. S., 1889, p. 91.

Sat late ovata, postice paullo ampliata, convexa, subtus scutello capiteque nigris, antennarum articulis ultimis quatuor sordide fulvis; thorace elytrisque flavis illo arcuatim excavato, utrinque puncto nigro parvo notato, his tenuiter punctatis, utrisque plagis magnis duabus, uno baseos, altera pone medium nigris.

Mas. Elytris utrisque prope suturam ante apicem tuberculo valido conico arcuatis.

Long. 61 mm.

Hab.

Eastern Ecuador (Buckley).

Head very slightly longer than broad, triangular; clypeus with a strongly raised longitudinal ridge; antennæ slightly equal to the body in length, filiform, very slightly attenuated towards the apex; the second joint short, obovate, the third twice its length, slightly longer than the fourth; black, the upper four joints piceo-fulvous. Thorax about one-third broader than long; sides rather broadly margined, straight and very slightly diverging from the base to beyond the middle, thence obliquely rounded and converging towards the apex; above convex, obliquely deflexed on the sides, hinder disk with a broad curved excavation, which is more deeply impressed on either side; just before the middle are two small round black spots. Elytra oblong-ovate, slightly dilated posteriorly, their apices rounded, conjointly sinuate at the sutural angle, convex, slightly excavated on the suture, below the basilar space finely but distinctly punctured; each elytron in the & (the only sex known to me) with a large conical obtuse tubercle, placed close to the suture just before the apex. [Baly.]

144. Diabrotica propingua, Baly. Journ. Linn. Soc., xix., p. 255. Hab. Colombia.

145. Diabrotica robusta, Baly. Journ. Linn. Soc., xix., p. 255. Hab. Colombia.

146. Diabrotica imbuta, Erichs. Wieg. Archiv., 1847, i., p. 168. Peru.

147. Diabrotica hemixantha, Baly.

P. Z. S., 1889, p. 91.

Ovata, postice ampliata, convexa, nigra, nitida, femoribus basi et subtus, thorace elytrorumque dimidio antico flavis; thorace leviter transversim sulcato; elytris distincte punctatis; punctis apicem versus fere deletis.

Var. A. Pedibus totis nigris.

Long.  $6\frac{1}{2}$  mm.

Hab. Upper Amazons (Staudinger).

Head slightly longer than broad; clypeus convex, the longitudinal ridge obsolete; antennæ filiform, rather more than three-fourths the length of the body, the second joint short, the third twice its length, equally as long as the fourth. Thorax rather more than one-half broader than long; sides straight and parallel from the base to just beyond the middle, thence rounded and converging towards the apex; upper surface smooth, middle disk impressed with a broad transverse sulcation. Elytra broadly ovate, dilated posteriorly, their apices conjointly regularly rounded; above convex, distinctly punctured, the punctures below the middle nearly obsolete. [Baly.]

148. Diabrotica spilothorax, Harold.

Col., Hefte xiii., p. 185.

Diabrotica quadrivittata, Baly, Trans. Ent. Soc. Lond., 3rd ser., ii., p. 349.

149. Diabrotica lata, Baly.

Trans. Ent. Soc. Lond., 1886, p. 451. *Hab.* Peru.

150. Diabrotica setifera, Baly.

Trans. Ent. Soc. Lond., 1879, p. 257.

Hab. Peru.

151. Diabrotica serraticornis, Baly.

Journ. Linn. Soc., xix., p. 255.

Hab. Colombia.

152. Diabrotica dilaticornis, Baly.

Ann. and Mag. Nat. Hist., 5th ser., iii., p. 81.

Hab. Amazons.

153. Diabrotica amplicornis, Baly.

Trans. Ent. Soc. Lond., 1886, p. 446. Hab. Brazil, Parana.

154. Diabrotica melancholica, Baly.

P. Z. S., 1889, p. 92.

Anguste ovata, postice ampliata, convexa, nigra, nitida, femoribus basi antennarumque articulo apicali flavo-albidis; thorace transverso, pone medium bifoveolato, nigro-piceo; elytris sat crebre punctatis, subrugulosis, punctis apicem versus fere obsoletis, interstitiis lævibus; utrisque limbo externo angusto, apice paullo ampliato, punctoque prope medium juxta suturam albidis.

MAS. Antennarum articulis apicalibus duobus dilatatis compressis.

Long.  $4\frac{1}{2}$  mm.

Hab. Ecuador (Buckley).

Clypeus concave and closely punctured on either side, medial line with a strongly elevated longitudinal ridge; antennæ in the 3 (the only sex known to me) with the second joint short, obconic, the third nearly twice its length, the fourth slightly shorter than the third, the tenth and eleventh strongly thickened and dilated, compressed, the former obcuneiform, the latter subhastate, very acute; these two joints conjointly exceed one-third the length of the whole antennæ; the two lower joints nigro-piceous, the apical one yellowish white. Thorax one-half broader than long; sides straight and parallel from the base to beyond the middle, thence very slightly obliquely converging towards the apex, the anterior and posterior angles acute; above convex, sparingly punctured on the sides, hinder disk impressed on either side with a large round fovea; nigro-piceous, the basal and lateral margins pale piceous. Elytra oblong-oval, slightly dilated posteriorly, regularly rounded at the apex, convex, slightly flattened along the suture, more depressed below the basilar space, rather closely punctured and finely and irregularly wrinkled on the anterior two-thirds of the disk, the posterior third smooth and nearly impunctate. [Baly.]

155. Diabrotica notaticollis, Baly.

P. Z. S., 1889, p. 91.

Anguste ovata, postice ampliata, convexa, flava, nitida, pectore femoribus dorso, tibiis posticis, tarsis, antennis, basi exceptis, verticis macula, thoracis maculis quatuor areuatim dispositis,

scutelloque nigris; thorace trifoveolato; elytris sat crebre punctatis, utrisque macula parva oblonga, infra basin prope suturam posita, fusca, plagisque tribus, prima subrotundata callum humeralum amplectente, duabusque transversis, anguste quadrato-oblongis, una prope medium, altera inter medium et apicem positis, nigris.

Long.  $4\frac{1}{2}$  mm.

Hab. Brazil.

Head not longer than broad, triangular; clypeus transverse, excavated on either side, medial line elevated longitudinally into a broad but ill-defined ridge; antennæ rather more than half the length of the body, slightly thickened towards the apex; the second joint short, subovate, the third nearly twice its length, the fourth scarcely longer than the third; the four lower joints piceo-fulyous, the rest black. Thorax nearly twice as broad as long; sides rounded, converging towards the base and apex, sinuate in front of the basal angle; above convex, minutely punctured; disk on either side impressed with a large round fovea; on the hinder disk, just in front of the basal margin, is a third impression, smaller and oblong; arranged in a curve on the anterior disk are four small oblong black spots; the middle fovea (in the only specimen before me) is stained with fuscous; it is probable that in some cases it is covered with a similarly coloured spot to those on the anterior disk. Elytra ovate, dilated posteriorly, regularly rounded at the apices; above convex, faintly depressed along the suture below the basilar space, distinctly punctured. [Baly.]